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# The Dental Digest

August 1930

*Editor-*

**GEORGE WOOD CLAPP, D. D. S.**

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# THE DENTAL DIGEST

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VOLUME XXXVI

AUGUST, 1930

NUMBER 8



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### THE DENTAL DIGEST

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# THE DENTAL DIGEST

VOLUME XXXVI

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## Odontology and Stomatology In Soviet Russia for the Past Decade

By PROF. GEORGE RANDORF, Leningrad

It was a plain case of association of ideas that made me take up my pen to serve the profession again through the medium of THE DENTAL DIGEST, as I had done in the pages of *Items of Interest* many years ago. In 1893 my first article, *The Schism in the Dental School of Paris*, appeared, in which I took sides with those eight professors who had started a journal of their own (*Revue Odontologique*), which clashed with the interests of the official organ of the administration. In 1929 I visited the Red Cross Dental Polyclinic in Odessa (Ukraine) with a view to receiving some professional treatment. Among others I noticed two dentists who had had the reputation for very lucrative private practices. It seemed to me that I had caught just a shading of a difference between their attitude toward the work at their own respective offices and at that of the socialistic surroundings mentioned above, and the thought occurred to me that the Revolution had done some wrong to them. Was not there a case in that city of Odessa, which prided itself on the nickname of "Little Paris," similar to the one in big Paris of 1893? And if there was, who but myself would be called upon by the fates themselves to bring it to the attention of the dental world?

But "facts are stubborn things," as

Comrade Lenin liked to repeat on some occasions. I recollect that in the pre-Revolutionary times I had seen a private dental school in Odessa which was conducted by a well known dentist, Dr. Margolin. Looking at the school building from the opposite side of the street, I could see through the windows a number of dental chairs in a row occupied by patients who were being treated by students of that school under the general supervision of their instructors. Passing by the same building in 1929, I saw a similar sight, only the patients were being treated by dental surgeons under the general supervision of a board appointed by the Health Department, to the care of which this Polyclinic was assigned. What had become of Dr. Margolin? Why, I shook hands and had a talk with the man alive, who was now the consulting dental surgeon at the above-mentioned Red Cross Polyclinic. He told me pretty nearly the same story as his colleague, Dr. J. A. Kleitman, the director of the All-Ukraine Stomatological and Odontological Institute of Odessa. Both agreed that mass work was quite a new departure in the life of Russia. I myself was very much impressed by the number of school children waiting for their turn. Whole classes were sent to the Red Cross Poly-

clinic with their teachers, who took care of them and organized entertaining games for those who had not yet been called to the dentist's chair. There were special days and hours reserved for the school children at that Polyclinic, but there are also special children's polyclinics.

Thus the great French philosopher, Auguste Comte, who coined the word *sociology*, was right when he affirmed that nothing in the social life of a people which was of vital importance could be destroyed without having some equivalent built up in its place. A similar thought was expressed by the great German socialist leader, Lassale, who declared that were a written constitution destroyed by a fire one day it would be reestablished on the very next day in accordance with the actual forces which had given rise to it. Looking at things from these points of view, we cannot join the chorus of those who think that the Russian Revolution of October, 1917, brought only destruction in its wake.

In a series of articles I purpose to show that, in spite of great difficulties and opposition, scientific and practical work has been carried on by progressive Soviet dentists for the past decade and to describe some of the achievements in the methods of mass dental service and the institutions that have been created by the strenuous efforts of an enthusiastic set of workers in the dental field.

Our study will involve two of the largest countries of the Union of Socialist Soviet Republics, namely: the Ukraine, the Socialist Soviet Republic in the south, with its leading center, Odessa; and the Russian Socialist Federative Soviet Republic in the north,

with its two centers, Leningrad and Moscow, the new capital. The former has a population of about 40,000,000, and the latter nearly 60,000,000.

Commencing with the Ukraine, we shall show the small beginnings, amounting sometimes to almost nothing, which the future grand structures of Soviet odontological and stomatological activities had for their basis—a case of the spirit taking precedence over matter. In the southern Republic of the Ukraine there still exists the old double form of graduating dental surgeons: (1) by means of a general medical course of studies with subsequent specialization, and (2) by passing through the odontological faculty of the medical institutes. On the other hand, in the north odontology has been considered a branch of practical medicine, covering not only the diseases of the teeth but also those of the oral cavity, as well as those involved and directly connected with the organs and tissues of the teeth—the maxillae, lips, cheeks, tongue, glands, muscles, etc. Looking upon the diseases of the teeth from this viewpoint, the State dental service in the northern republic covers the whole field of stomatology, its object being the prevention and treatment of all diseases of the teeth, the oral cavity and the jaws which occur among the people.

As the Soviet power was established in Ukraine only in the spring of 1919, it will be necessary to mention here those decrees which were issued in the north a year before and introduced in the south a little later.

The People's Health Commissariat was created by a decree of the Council of People's Commissaries at Moscow

on July 11, 1918. By that act dentistry was for the first time incorporated into the general system of safeguarding the health of the people.

On August 25th of the same year a statute was legalized by the subsection of the People's Health Commissariat of the R. S. F. S. R. proclaiming as its object "the working out and realization in life of all measures of reform of dental service of the Republic upon a socialistic basis."

The ordinance of September 17, 1918, ordered "the taking account of all odontological and technical appurtenances and materials," with a view to nationalization; that of October 1st had for its aim "the closing of dental schools and the transfer of odontological education to the universities," that is, to the medical institutes, where chairs of odontology were created, the attendance at which was made obligatory for the students; that of December 20th called for "labor mobilization of the entire medical staff including dental surgeons and their assistants"; lastly, that of December 26th of the same year commanded the "summoning of dentists for State service and the requisition of private hospitals and dental offices."

In 1919 the dental subsection of the People's Health Commissariat of the Ukraine was organized together with a Scientific Odontological Committee. The latter transferred the odontological education to the university. The three dental schools of Kiev were nationalized and in their place repeating courses, exemplary ambulatories and odontological clinics opened. However, in August 1919 the People's Health Commissariat established the State

Odontological Institute, which inherited the property of the above-mentioned three establishments, besides receiving a grant of 100,000 rubles on account of its forced evacuation. Unfortunately that Institute had to discontinue work twice: (1) when Kiev was taken by Gen. Denikin's army of volunteers, and (2) at the time of the Polish invasion.

In October 1920 the State Odontological Institute was transferred to the Kiev Medical Institute as a separate faculty, with a four years' course of studies. In Harkov, the new capital of the Republic of the Ukraine, and in some other cities dental schools continued to exist. In 1921 the other medical institutes of the larger cities established similar faculties; only in Odessa does there still exist a chair of odontology at the Medical Institute.

As is well known, in pre-Revolutionary Russia private dental offices served the well-to-do sector of the population of the larger cities and, to a very small degree, some high schools and hospitals. Only about a decade before the October Revolution appeared the first rudiments of dental aid to the insured laboring people (social insurance), which was organized at certain factories and works. During the World War there appeared for the first time military dental offices and hospitals for soldiers with wounds of the jaws. All the dental service had been concentrated in regional and county cities and towns, but nothing of the kind could be found in the vast number of the rural districts.

Let us take a typical example of the way things have been progressing in the Ukraine since the Revolution. In 1919

the chief of the local Board of Sanitation issued an order for the organization of a dental office at the People's Hospital of the city and county of Starobolsk. Here "creation" was accomplished pretty nearly out of nothing, the case reminding one of starting a trip around the world with no other means but a willingness "to rough it." Of course the task would have been altogether impossible of accomplishment but for the offer of a public-spirited dentist to transfer his private dental office to the hospital.

In April 1920 a dental meeting took place in Harkov, and when it was reported that some 50,000 people had been served by one dental office, it was decided to supplement it by another one, but unfortunately without another dental chair, as there was none to be had and money was scarce. Thus matters continued till 1924, when at the initiative of the superintendent of the Workers' and Peasants' Ambulatory dental service for the insured was organized at that ambulatory, which required the transfer of the only dentist and his assistant from the People's District Hospital to the Workers' and Peasants' Ambulatory. However, in 1925 both institutions were consolidated into the Workers' and Peasants' Polyclinic, and a second dental surgeon and another technician were added to the staff. In 1928 a third dentist was engaged for special work at the Children's Polyclinic, which served chiefly children of school age and, incidentally, those of pre-school age outside.

The dental office of the Starobolsk Workers' and Peasants' Polyclinic served workmen and employees and their families, peasants, the inmates of

the Artillery Home, and the military brigade, and also extended outside help to all requiring it, this being the only ambulatory in the city and the district. The city itself had about 8,000 inhabitants, and the district served had a radius of some thirty miles with a population of about 40,000. The average reception by each dentist was 25 to 27 patients per day, the insured being received in the morning from 7:30 to 9, their families from 9 to 1 p. m., and the others later. The order of reception of the insured as well as the dependent peasants was strictly regulated by a registrar, who handed out cards in the order of entry.

The ambulatory card contained the diagnosis and treatment. The work done by the dentist was recorded by a daily check-up on a sheet duly prepared by a special registering officer, who noted exactly all the stages of the dentist's performance, and this material was also utilized in the preparation of monthly and yearly reports.

The average monthly capacity for each dentist was 500 to 600 patients; the number of extractions under chloro-ethyl 65 to 75 a month, under general anesthesia 12 to 15; different fillings from 50 to 55 per month. The work was made possible, thanks to the presence of a special dental assistant, whose duty was to clean and sterilize the instruments and prepare some pastes and all the fillings.

Attached to the dental office was a Dental Technical Laboratory, where one technician executed the prosthetic work, the order of delivery being first to the insured, next to their families and then to the peasants. For the preliminary preparation of the mouth the

client was directed to the Medical Controlling Committee, which approved and signed a paper upon the presentation of which he got a fixed hour for taking the impression, receiving his set, etc. The prosthetic work was often prepared by the dentist himself, who received for the one or two hours spent on it an additional salary of 25 rubles per month. On the average, there were about 12 to 15 prosthetic sets, with the number of teeth used from 75 to 125 and sometimes 150 per month. The dental laboratory was well supplied with the necessary instruments and materials.

An interesting feature of the Soviet policy is to carry on (1) educational work in the line of general abolition of sanitary illiteracy among the population, in which dentists take part, together with all medical workers of the city and the district, and (2) purely dental sanitary educational work in the polyclinics themselves by means of separate talks to the patients happening to come there and lectures to patients awaiting their turns at polyclinics. This is done in the following way:

At 10:00 a. m. a bell announces the

interruption of the reception for half an hour, when an informal conversation between the dentist and the patients must take place. During this interval all the other offices, as well as the pharmacy, discontinue work, their employees going to take breakfast while one of the dentists talks on some subject connected with his specialty. These conversations occur twice a week. If a regular lecture is delivered, it takes up only twenty minutes, the remaining ten minutes being reserved for questions and answers. Conversations are also carried on with school children by their school physician, whose duty is connected exclusively with investigatory and medical prophylaxis among the pupils. As to the children of pre-school age, they have not yet been reached and involved, but they receive aid from the school or the children's physician, such help being in the nature of first aid or accidental help.

According to the most reliable statistics furnished by Prof. P. Dauge, the inspirer of the new ways in Soviet dentistry, there were 2,000 dentists in the State service in the Ukraine in January 1928.



## Exodontia and Oral Surgery as Related to General Practice\*†

By HARRY J. FIELD, D.D.S., Newark, N. J.

In my remarks to you this evening I shall make every effort to give you some practical information and eliminate theory as much as possible.

Before going into the surgery of fractured roots it will be well to take up some of the fundamental principles and general considerations to be observed in the removal of teeth. The main force or traction should be directly along the line of the alveolus. Too many teeth and alveolar plates are fractured as a result of a sudden strong buccal or lingual movement. In the maxilla this sudden outward force may at times fracture the tuberosity *per se* or include the floor of the antrum. In the molar region you are possibly familiar with the picture of the buccal plate coming away, denuding a segment of a root of an adjoining tooth. In the cuspid region it is possible for an additional tooth to come away with the outer plate, tearing the soft tissues along with it up to the buccal fold.

A method of delivery of teeth which has proved highly successful in my hands is a rapid vibration in a small buccolingual arc. This serves to break up the periodental attachment, after which upward or downward force is brought into play with a slight buccal and, at times, slight lingual version at the end.

\* Presented before the Bayonne Dental Society, Bayonne, N. J., February 19, 1930.

† From a Root Clinic presented at the Mid-Winter Meeting of the New Jersey State Dental Society, Atlantic City, N. J., January 18, 1930.

In removing the maxillary teeth the patient's head should be held very firmly and in the case of the mandibular teeth both head and mandible should be well supported, the thumb resting on the inferior border, while the second and third fingers straddle the teeth.

In order to minimize failures in exodontia, you must further observe the principle of loosening the investing tissues with a suitable instrument and then grasping the tooth well below the neck. The beaks of the forceps should open readily, directly in line with each other, and when the joint becomes worn, the forceps should be sent away for repair.

In the removal of the maxillary cuspid, it is sometimes necessary to make two small diagonal incisions and reflect the labial tissue in order to reduce a portion of the outer plate. This may be done with a sharp curet, about the size of a medium-grown pea, which is placed on the bone covering the root near the gingival and brought downward with a firm movement.

The maxillary lateral often presents a curvature of its apex in the distal direction. The movement here should be lingual and should be followed by a twist in the direction of the frenum.

When a tooth presents a definite exostosis, it is not advisable to make any attempt to wiggle the hypercementosed part out of the bony investment by means of a long-drawn-out struggle, which results in excessive trauma and

usually shocks the nerves of the patient quite badly. It is much better practice to open the tissues for the removal of some of the outer plate down to the enlarged portion before making forceps application. This bone can be taken away with a well-controlled hand-chisel without resorting to the mallet.

I do not know how many of you have considered the possibility of a root, gold

In maxillary cases I should like to suggest the use of the towel, which is raised into the mouth to form a perfect dam, up to and including the region of the third molar, without gagging the patient (Fig. 1). I have been using this method in my general anesthesia cases, in addition to my throat pack, for a number of years and find it to be a highly satisfactory procedure. Portions



Fig. 1

The author's towel technic for all maxillary extractions. The towel draping the patient is merely raised into the mouth to act as a perfect dam without causing gagging. Portions of fillings, enamel, gold crowns, dowels, roots and teeth suddenly delivered come away directly upon the towel.

crown, filling or entire tooth entering the air passages during extraction under local anesthesia. The usual belief is that this accident is limited to general anesthesia, where the cough reflex is abolished. It is my practice always to approach a mandibular tooth with a suitable pack, placed just posterior to the site of extraction, without relation to the anesthetic employed.

of foreign material are prevented from entering mandibular sockets and other regions of the mouth.

In removal of the fractured root Feldman, of New York, has given the dental profession a method which is a unique and brilliant advance in exodontia. A bi-bevel flat spear drill mounted in the engine is quickly passed through the bone and into the root,

whereupon lever force is employed for delivery. With this technic the wedge principle is eliminated and the septum of bone on either side of the root is left untouched. We shall illustrate this with the removal of an apical portion of a mandibular bicuspid. Two diagonal incisions (Fig. 2) are made with a Williger knife, the tissue is reflected back and the outer wall of the bone is

the Feldman patholever, a Crane pick or a suitable Winter exolever, but at the same time I should like to stress the importance of understanding the principles involved and not one particular instrument. The edges of bone are now smoothed, gauze saturated with hot saline is vigorously applied in the depths of the cavity, and the flap is replaced with a gauze and vaseline

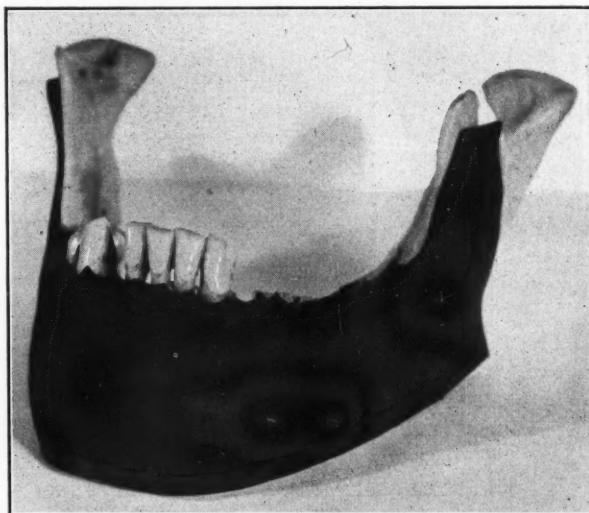


Fig. 2

Showing the diverging incisions made with the Williger knife. This type of flap unites perfectly without suture in many cases.

cut away with a narrow rongeur. The fragment may now be seen, whereupon the drill opening is quickly made in direct line with the root, and a suitable lever placed into the opening and directed upward. I wish to emphasize again at this point the importance of holding the mandible and the head of the patient very firmly. You may employ as a lever my pathfinder (Fig. 3),

dressing at the upper end of the socket as a matrix. Have the patient bite on some saline-saturated gauze and after ten minutes you will know whether or not a suture is necessary. (Figs. 4-7.)

When dealing with mandibular molar roots, make the opening at the bifurcation and then move the lever from side to side before giving it the upward motion. Either this will break up the bi-

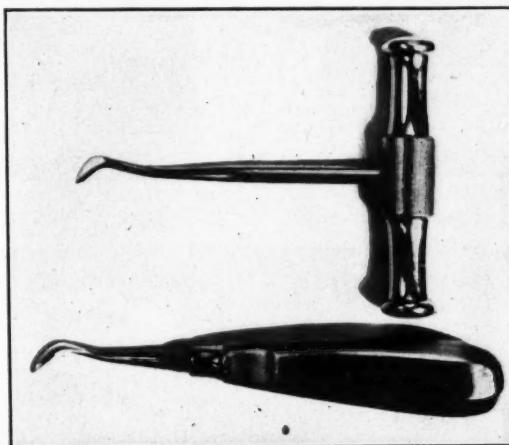


Fig. 3

The pathfinder, with and without the cross-bar handle, may be used universally.



Fig. 4-A



Fig. 4-A



Fig. 4-A

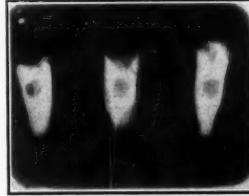


Fig. 4-B

Fig. 4

A—Three cases of fractured mandibular bicuspid roots.

B—The same roots as above, with the openings made by the drill for the introduction of the lever.



Fig. 5



Fig. 5



Fig. 6



Fig. 6



Fig. 7

Fractured apex of a mandibular bicuspid and the immediate post-operative appearance. Note the drill opening clearly visible on the film.

Fig. 6

A brittle mandibular bicuspid which fractured during extraction under general anesthesia. The apex was recovered in one minute. Note the lines indicating the incisions and the opening of the drill in the apex and in the bone.

Fig. 7

Fractured mandibular bicuspid roots, with lead markings in the drill openings indicating the approximate entrance. (Film taken on dry specimen.)

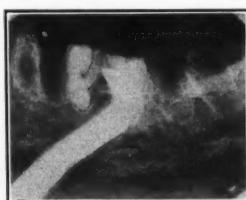


Fig. 8

The pathfinder directed into the drill opening between fractured mandibular second molar roots. (Film taken on dry specimen.)

furcation and succeed in raising one root or, if the bifurcation is low and strong, the entire tooth will be raised on the elevator. The Lecluse elevator has been very successful in my hands for this splitting and lifting operation.

In the case of mandibular molar roots, where the fracture is not deep, it is not always necessary to reflect the tissue. The drill is passed downward between the roots at the buccal border (Fig. 8). I believe, however, that the

reflection of a small neat flap is a very conservative step in these cases, as it permits an open-view treatment of the bony edges with a large spoon curet following the removal of the roots. The tissue is replaced without a suture and unites perfectly at the lines of division. It has been my observation that nearly one hundred per cent of these wounds make uneventful recovery without any shelling of process and without any post-operative pain.



Fig. 9

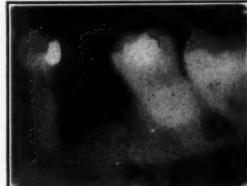


Fig. 9

Fractured distal root of a mandibular molar, with the adjacent teeth converging toward each other. Note the thick septum and the very thin bony covering at the distal aspect of the second bicuspid. An elevator applied in the mesial socket is contra-indicated.

Note also the untouched thin bony covering in the post-operative film.



Fig. 10

Fractured distal root of a mandibular second molar with a thin bony covering at the distal aspect of the first molar.

Lever force directed from the mesial socket is contra-indicated.

This film shows the lever directed into the opening made by the drill against the fractured segment.

Fused mandibular second or third molar roots usually present a great deal of difficulty, owing to the absence of a bifurcation. A well-defined drill opening is made into the cementum at or

breaking through such an abnormal septum is definitely eliminated!

In the maxilla you may employ the drill for the removal of a fractured bicuspid or molar root, and any number

of other indications will be found for its use. If the lingual root of a bicuspid should fracture at or above the mid-point, a small diagonal flap is reflected on the labial aspect, and after using a rongeur to cut away the narrow portion of the labial alveolus, the drill is introduced at a right angle directly through the septum into the root. Many times you will be gratified to observe the root emerge from its socket merely as a result of the vibration and contact of the drill. In the molar region, if the two buccal roots should fracture, the opening is to be made between them. If the lingual root should fracture, employ the same technic as for the lingual root of a bicuspid, except that the lever is passed downward. You should never force a root into the maxillary sinus, which, in my opinion, is at times a rather serious accident, in view of the trouble the patient may be put to.

If a root is forced into the sinus, the opening should be enlarged, but every effort should be made to preserve the buccal wall. The teeth of the patient are then closed over a towel, and, while the nostrils are both held tight, the patient is asked to blow hard through the nose. If this procedure does not dislodge the root, the antrum should be washed with a canula and warm saline in an irrigating can. Be sure to preserve all the return flow in the basin and examine it carefully, as the root may be washed out unnoticed by the eye. Failing this, a sterile loop is gently passed about the floor of the sinus. An orthodontic wire or a wire used to measure the circumference of the tooth for a crown restoration can be twisted into a loop and retained in the broach handle used in root-canal work. I use a

blunt ear curet, which can be bent to any angle desired. After the removal of the root a small dressing is placed at the orifice of the socket and is renewed daily until granulation takes place. If the opening does not close, a plastic operation becomes necessary, in the manner described by Dunning of New York.

The management of cases presenting with swelling is always a popular theme for discussion. Briefly, if the pus is in the alveolus, immediately beneath the apex, and the tooth is fairly loose, remove it. If the pus is on the external surface, you have nothing to gain by extraction. Open the abscess with a liberal incision and insert a drain. This advice is to be heeded especially in the management of a mandibular tooth presenting an extensive periostitis along the external surface of the bone, with an infectious cellulitis.

If an apex fractures during acute pathology, do not go down into the spongy bone with elevators, as you may bring on an osteomyelitis. Leave the apex alone for forty-eight hours and then remove it.

When the face is swollen, extract the tooth to establish drainage, but do not disturb the apical region for the removal of a granuloma or a cystic area. Here again you may bring on an osteomyelitis. Surgery of the periapical region must be done at a later sitting. If there is a large granuloma in the upper anterior region, you may remove this by cutting a window on the labial aspect without disturbing the bone at the ridge. After removal of the granuloma the walls of the cavity should not be curetted any further, but the edges should be made smooth.

Before leaving the subject of swellings I should like to say that many surgical cases result from faulty diagnosis in the matter of temporizing with cases really calling for incision or extraction. One cannot put down any arbitrary formula for the proper care of acute cases other than the rules enumerated above. Conservatism and radicalism are at times equally harmful to the patient. Keen judgment, based upon experience, and a thorough knowledge of surgical principles are the only keynotes to success in the care of these conditions.

The eruption of the mandibular third molar is a problem frequently disturbing to the general practitioner. I would warn you to examine these cases carefully for possible Vincent's infection and localized abscess formations. This tooth so often causes extensive involvement of the throat, cellulitis of the neck and such general septic infections that it behooves every practitioner to give the matter the attention it deserves. When the tooth is only partially erupted and it may be readily seen that it will never present a normal relationship at the lingual, buccal and distal aspects, removal of the tooth should be advised at once. I would also caution you against the liberal use of block anesthesia in these cases and against surgical interference when the patient is unable to swallow and is decidedly ill.

In the control of hemorrhage I have found Monsell's solution to be the most useful agent. No slough is formed, and when the dressing is removed, no further bleeding is noted.

I should like to stress the importance of the liberal use of the roentgenogram as a pre- and post-operative measure.

This will serve to obviate unforeseen conditions, such as a tooth decayed beneath the gum margin and readily susceptible to fracture, localization of additional roots, and the discovery of hidden roots or areas of bone pathology in the region of the extraction which might later be attributed to you. Bits of enamel, spicula of bone and foreign bodies, such as fillings, which drop into sockets, may easily be noted and removed at the time of extraction.

In taking a film of a third molar in the mandible, always bring the upper part of the film quite high with relation to the morsal surface. This will give the true relation of the bone at the distal aspect of the crown and will greatly aid in the operative procedure.

I should like to make some reference to referred pain. The patient may want you to remove a bicuspid, as the pain is very intense in that region. However, a careful examination may show that the tooth is normal, the pain coming from a deep, concealed cavity in the second or third molar. The burden of such an examination is upon the operator, even though the patient may misdirect his attention.

In many cases there is a maxillary sinusitis of nasal origin following a cold. The patient may here request you to remove a maxillary molar. If the film shows a normal condition, never extract, but refer the patient to a rhinologist.

In major neuralgia of the fifth nerve, true tic, never extract normal teeth in the hope of a cure. Refer your patient to a neuro-surgeon. I do not favor alcohol injections or resection of local nerve trunks.

The subject of pain following extraction is one which, I know, frequently



Fig. 11-A



Fig. 11

A—Crane pick indicating the drill opening in a fractured mandibular lateral root.  
B—Showing the position of the instrument directly in line with the root for elevation. (Films taken on dry specimen.)



Fig. 12



Fig. 12

Fractured root of a maxillary cuspid. Note the immediate post-operative appearance and the opening in the root, which was removed from above downward.



Fig. 13

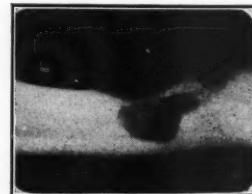


Fig. 13

A retained root, with extensive pathology, in a thin mandible. The use of the mallet and chisel is contra-indicated.



Fig. 14



Fig. 14

Fig. 14

A fractured third molar, in a thin mandible, contra-indicating chisel-mallet technic. Several drill openings were quickly made above the root, and one opening directly into the cementum before elevation.

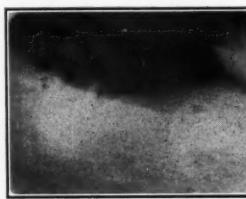


Fig. 15-A

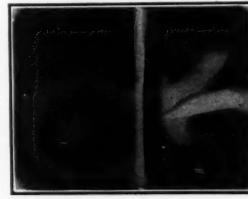


Fig. 15-B

Fig. 15

A—A fused mandibular third molar, decayed beneath the bone line, contra-indicating forceps.

B—The tooth indicated in A speared upon the pathfinder, and the immediate post-operative appearance of the bone.



Fig. 16

Fracture of both apices of a mandibular molar. The lines of incision are shown, as well as the point of entrance of the drill for the reception of the lever.



Fig. 17

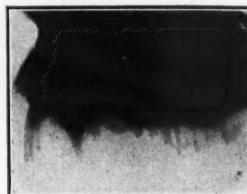


Fig. 17

Mandibular first and third molars fractured during extraction. A small flap was reflected in each area, and a drill opening made between the roots for the reception of the lever. An immediate post-operative film shows conservation of the investing osseous tissue.



Fig. 18



Fig. 18

A partially erupted mandibular third molar decayed beneath the bone line (lingual version). The drill passed distally to the bifurcation in this case, and the pathfinder (cross-bar) rested on the heavy ramus for leverage. Note the untouched shell on the extracted tooth and the groove cut by the drill.

engages your attention. I have seen cases where an intense reaction followed the removal of a loose tooth and others where a difficult impaction was removed and the post-operative period was devoid of any pain whatsoever. Temperament, physical condition, anesthetic employed, amount of trauma and the condition of the upper aspect of the alveolus, all play important rôles.

At the Mayo Clinic no patient is permitted to rinse his mouth for twenty-four hours in order not to disturb the blood clot. In those cases where the clot breaks down and a greenish discharge

is noted, the introduction of caroid powder for several hours will digest the clot, making curettage unnecessary. The socket is irrigated with Dakin's solution and painted with aromatic sulphuric acid.

In bad cases, paint the dry socket and exposed bone at the surface with a mixture of trichloracetic acid and menthol, equal parts. Send the patient home with a dressing of guaiacol in the socket and order a hot-water bag on the temple and in the region of the ear. Avoid large doses of allonal, as I have seen some very bad cases where the patient

was overdosed. If this drug is used moderately, the action is good.

If the finger is passed over the outer wall of the socket and causes intense suffering, it is best to make two small diagonal incisions, reflect the tissue and remove the sharp projecting bone with a knife-edged rongeur and large spoon curet. It is amazing what comfort can be given to a suffering patient in but a few moments. For very apparent reasons this should be done under a general anesthetic.

If the tooth or teeth have been removed several weeks previously and exuberant granulations with suppuration are noted, an x-ray film will usually show bone sequestration in

process. A large spoon curet passed gently into the wound and withdrawn with a rapid motion will usually clear up the area.

You will observe that I have not dwelt upon the treatment of cysts, impactions and osteomyelitis and other conditions which do not properly come within the scope of the general practitioner.

I trust that in the subjects I have stressed the proper phases have been covered, and that some information has been passed on which will be of genuine assistance in solving problems intimately related to your daily tasks.

130 Market Street



[THE ECONOMIC PROBLEM]

*The great economic problem ahead of the dental profession is the transformation of latent demand for dental service into effective demand. This transformation can be assisted by educational measures, but will not proceed far as long as the cost of service seems high in comparison with other expenditures which large groups of the population feel to be necessary charges on their limited incomes.*

—DAVIS.

## Orthodontia\*

By R. C. WILLETT, D.D.S., Peoria, Ill.

Regardless of the method of attachment employed, it will be readily conceded that the success of a fixed orthodontic appliance depends upon the security of its anchorage. Since the introduction of a certain type of molar anchor band by Fauchard, in 1723, up to the present time there have been many modifications or improvements on it. All operators are aware of the fact that many undesirable features are attached to the employment of an anchor band.

Our first consideration is to be humane and accomplish all the service connected with orthodontic procedures with a minimum of pain and discomfort to the patient, but, in the many records that we have, little thought seems to be given to the possibility of comfort and security being a combination of the procedure. Whether the band is made by indirect or direct procedure, it takes time, a little patience and annoyance to the patient to make one that does not encroach at some minute point upon the soft tissues. With as much care as I could exercise, I have not always been able to do it.

The outstanding fault in making and adapting the anchor band, whatever the type may be, is the annoyance caused the patient by the separation of the teeth, whether you use the separating wire or crowd the band material

between the contact points. A displacement of the teeth is caused by the thickness of the metal band used between them, this displacement leaving a broken contact point when the bands are removed. There is frequently irritation of the interproximal tissues. There is injury to the investing tissues of the teeth in the event of a broken band or in the loss of the cement attachment to the tooth, permitting the band to be crowded over the tooth and into the gingival tissues. A certain result of such an inefficient appliance would be tissue injury and great discomfort to the patient.

## OVERLAYS

Due credit must be given to J. Lowe Young, of New York, who coined the term *overlay* and in 1920 gave a demonstration of its use. It was his technic that furnished the germinal ideas, and, finally, the system that I am now using.

The first cast hard-gold overlays that I successfully made were those used as a part of fixation appliances in the treatment of jaw fractures. In April 1924 the first overlay I used, outside of those used as fixation appliances of jaw fractures, was in the making of space-maintainers for application where a premature loss of one or more deciduous molars had occurred. The object of such an appliance was to bridge the space with a semi-fixed bar, thus restoring function in the affected area and preventing occlusal displacement of the teeth of the opposing arch. Due to

\*A Topic Discussion before the Twenty-fourth Annual Meeting of the Marquette University Dental Alumni Association, Milwaukee, Wisconsin, November 16, 1929. (From a stenographic report.)

occlusal stress on such appliances, they proved to be more or less of a failure when the anchor band was used in their construction, but the overlay used on such anchor teeth solved the problem.

It was found that the overlay, when used in such appliances, rarely became free of the cement attachment, and that when it did the investing tissues were not injured as they are liable to be when a band is used and becomes free of the cement attachment.

The success of overlays in the construction of space-maintainers was followed by their use in orthodontic appliances where a general expansion of the mandibular deciduous arch was indicated, and where such expansion would be favorably reflected in the development of the maxillary arch to a more normal width through the forces of occlusion. Because of the satisfactory results obtained by use of the overlay in such cases it was next used on the maxillary deciduous molars as a base of anchorage for lingual wires.

Since success attended the use of overlays as a base of anchorage for the lingual spring wire, buccal attachments were made to the molar overlays that have carried successfully every type of labial arch wire, even to the use of elastic intermaxillary ligatures in the treatment of extreme types of bilateral distocclusion and mesiocclusion cases.

#### TECHNIC

Now I will give the consecutive steps. However, there is a word I want to say in advance, that is, that the consecutive steps in the technic and the materials used therein are given as the result of

careful study and much research work and sustained application in practice.

The first step is to clean and polish the teeth thoroughly. Make certain that all foreign substances are removed from the cervical portion of the molar teeth. This is positively necessary.

The next step is taking the impression. With some exceptions the method of taking the impression closely follows the technic developed by Baker of Evanston, as he reported in the clinic at the Congress. A quick-setting impression compound which has been softened in water at a temperature of 130° F. is used in a partial impression tray, with the handle eliminated. The tray is introduced into the mouth and the compound forced around the teeth and soft tissues in the usual manner until the occlusal surface of the tooth is close to the tray. As soon as this is done, and while the impression material is still soft, the tray should be removed. The tray and impression are removed quickly before the compound impression is thoroughly hardened. Baker takes his thumb or finger or a pellet of wet cotton in pliers and distorts the impression before placing a second piece of softened compound in it.

In my own practice I do not distort this at all before placing the second piece of softened compound in there and rebasing it in the mouth. Following that it is preferable to chill it with ice-water. With the type of tray that is used you can pull it directly off the tooth. I can put four of these in the patient's mouth, give him a glass of ice-water to drink and then snap all four of them off. I have taken four of them in the mouth at the same time.

The next step is the making of the

compound investment model. The compound impression is filled with a well spatulated, thick, creamy mixture of low-heat investment. In my presentation of this something was said about using an accelerator. You can put the accelerator in this, but it is to be used only in case of emergency. I prefer not to do it, because the accelerator does not make so hard a model as the one made without the accelerator added to the low-heat investment material. The model is hard and strong and non-shrinking when subjected to a drying-out heat not exceeding 300° F.

While the low-heat investment model is still warm following its separation from the impression compound with the thumb and finger, lightly press into place over the selected molar tooth a piece of 30-gauge sheet casting wax.

Further adaptation of the wax is made with a cube of art gum, which is a kind of yellowish substance. That is used to adapt the wax further to the model. The excess is then trimmed until you have just a little rim around the cervical. If you want to cut out the cusps, just leave the tooth fully covered or cut that off when you are polishing it.

If you want to reinforce it, you may thin it down, putting the sheet wax on a glass slab or a smooth table-top, but usually I find that the 30-gauge is sufficient.

There is another point. Before going further with the preparation I take a little alcohol (48%) on a pellet of cotton and thoroughly wipe these off. More than a 48% solution of alcohol will cause a chilling of the wax, which will curl from the model, but a 48% solution will not.

With a sharp plaster knife, trim the low-heat investment model down to within two millimeters of the molar tooth covered by the wax pattern. Make it out of hard casting wax on the overlay pattern, that is, on a desirable point on the buccal or lingual, and attach a 16-gauge sprue wire. The exposed portion of the low-heat model is then painted with inlay paint, applied with a camel's-hair brush, and the model is slightly jarred as the paint is put on. I put some in a little crucible, run some water into it, then take my brush and just drop that on the wax, just shaking it, which gets all the bubbles off, and then it is smooth.

When the layer of inlay paint is well set, it is mounted in a sprue-former and invested in the casting flask, in an investment material that will stand a high degree of heat.

The wax and moisture may be eliminated by a slow or fast method, but surer and more satisfactory results can be obtained through slow elimination effected by gradually raising the temperature to a point not exceeding 300° F. and maintaining it there for a period of not less than six hours. A still better way is to allow the investment to remain in the drying-out oven overnight and do the casting in the morning.

A great convenience in the elimination process is the common electric drying-out oven equipped with a variable rheostat. One of the cheaper, low-grade, precious-metal alloys, unalloyed with platinum, or an alloy high in platinum content may be selected for the making of overlays. Both as a matter of economy and because a wider range of carat in gold solder may be

used, it will be found most satisfactory to choose a grade of alloy containing at least three to eight per cent of platinum. An alloy containing a high percentage of platinum can be remelted and used again many times without loss of desirable qualities, provided, of course, that care has been exercised in grinding away all solder previously used in the attachment of orthodontic-appliance parts. A reducing flux should be used in remelting. The weight of an ingot of alloy for casting one overlay should be from four to six penny-weights.

The casting and finishing of the overlay is done in the usual manner of polishing. The only thing is that in pickling (if you brush these off with a paste of bicarbonate of soda and a stiff brush, they will seldom need pickling) I put them in sulphuric acid and then turn the warm water into the pan. Of course as the hot water goes in there it does a vicious pickling, but at the same time it does not seem to take the temper out of the casting.

#### THE TIME FACTOR

The time required for making four first permanent molar overlays has been carefully checked in a number of cases and will run about as follows:

Taking sectional compound impressions, by the Baker method, of the maxillary and mandibular molars, 10 minutes.

Mixing and pouring the investment material over which the sheet wax is adapted, 3 minutes.

Separating impression compound from the investment models, adapting wax, trimming away excess wax, cleaning wax pattern with 48% solution of

alcohol, attaching sprue wires and investing in flasks ready for drying, 18 minutes.

Casting four overlays as invested in the four separate flasks, 8 minutes.

Cleaning investment material from casting and finishing overlays ready to be fitted on working holders or on the teeth in the mouth, 25 minutes.

The time consumed here will vary according to the care that has been taken in the earlier steps of the process. The mixing and pouring of investment materials has everything to do with the smoothness of the casting and the saving of time in finishing. The total time consumed for the making of four overlays is sixty-four minutes.

Now, mind you, it will be noted that, of the time required for the consecutive steps of the technic, only ten minutes were spent with the patient in the operating chair and five minutes in the laboratory. This latter phase of the technic comes quite within the scope of any laboratory technician possessed of average skill. I have taken a girl into the office who had never seen a dental laboratory before and in three days she made as good overlays as I did.

#### COST OF MATERIALS

In view of the use to which precious metals are put in the making of orthodontic appliances, their cost should not be considered the factor in the choice of materials. Still it is of interest from an economical standpoint to see how the expense of materials employed in the making of overlays may compare with that used in the making of molar anchor bands. Aside from the cost of the alloy of gold and platinum content,

the other items are so small that they should not be considered.

For this estimate Tinker's formula No. 2 alloy, known to all of you, has been selected. It is an alloy containing 8% platinum and has been found to possess the desired qualities, which it retains through repeated fusing. The retail price of this alloy is \$1.65 per pennyweight. The average weight of a permanent molar overlay is nineteen grains and has a value of \$1.30. When removed from the flask, and before the finishing process, six grains are ground away. When this is recovered in the dust-pan, this scrap will have a value of 27 cents.

At these prices and valuations the actual cost of one molar overlay of average size and weight will be \$1.03. The material in this overlay, however, may be used over several times with a loss of only fourteen cents each time. In a band material valued at \$2.50 per pennyweight, which I believe is the average price of these goods, one average-size molar band weighing nine grains will cost 96c, and the scrap we have saved will have a value of 42c. The average net cost of an anchor band on this estimate is 54c.

The economic advantage of the overlay is the fact that it can be repeatedly put into new overlays, whereas a band can be used only once and does not have the same value.

#### APPLIED USES OF THE OVERLAY

Time will not permit the enumeration of the variations in the making

and using of the overlay. Only a few of its advantages in the application will be cited and illustrated. In the case of a child-patient of tender years it is most advisable to apply early treatment in the correction of that tendency to mesioclusion accented by the lingual version of the maxillary deciduous teeth. In cases where a combined anchorage of molars is advisable, the overlay can be applied without doubling up on the thickness of the material between the teeth, which doubling would attend the use of united anchor bands.

Here is the great advantage gained by the use of the cusp cast overlays instead of lacing the teeth with wire ligatures, which should be conceded by the most skeptical. Comparative comfort is afforded the patient in the preparation and placing of overlays by surgical orthodontia, and it is less of a nerve strain to both the operator and the patient. The care involved has been proved by the writer through years of experience.

The overlay can be used to advantage in all cases where a molar anchorage band would indicate the use of fixed orthodontics. I use anchor bands, but more overlays, because of the fact that the cervical margin of the overlay can encroach no further and the irritation of the gingival tissue is minimized. The occlusal surface does not interfere, as some might suppose it would. Patients who have previously gone through the experience of fitting, cementing and wearing of anchor bands invariably express the preference for the overlay.

535 Jefferson Building

## Restoring Pleasing Expression with Artificial Dentures\*

By JAMES P. RUYL, D.D.S., New York, N. Y.

### FIFTH ARTICLE

#### THE IMPORTANCE OF MAXILLARY OVERJET IN CERTAIN CASES

Fully seventy-five per cent of cases requiring artificial dentures show more overjet of the maxillary teeth than we have been taught to look upon as normal. If in such cases the artificial

*f, th, etc.,* and the dentures will dislodge each other in speech and mastication.

If patients whose edentulous arches show pronounced overjet are carefully

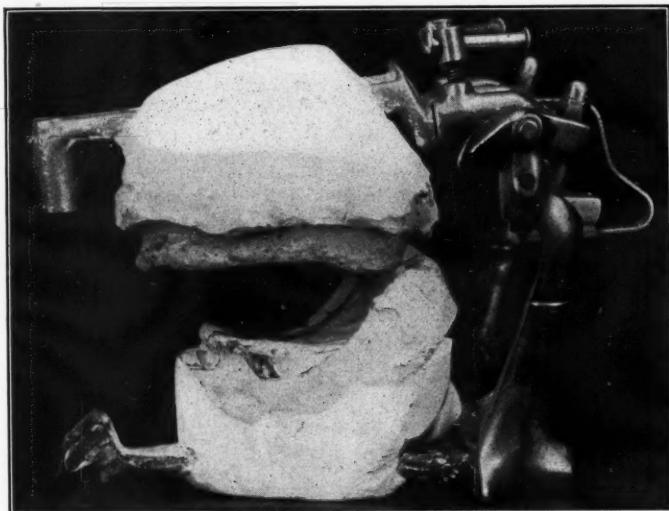


Fig. 1

An overjet more or less like this characterizes a large proportion of edentulous cases and offers to the prosthodontist important guidance in denture construction.

anterior teeth are set with only the small amount of overjet which characterizes normal occlusion, the dentures will be a failure, because the expression will not be satisfactory, the patient will not be able to enunciate the tooth sounds, *s*,

watched during speech, it will be seen that the mandible has a decided forward and backward movement, practically in a horizontal plane, which is not characteristic of people with only a small amount of overjet. When a person with a big overjet says *s, th, etc.*, the mandible habitually slides forward until the edges of the mandibular in-

\* This is the fifth of a series of six articles by Dr. Ruyl on this subject.

cisors come into contact with the edges of the maxillary teeth to make enunciation possible.

#### RESTORING THE EXPRESSION

If there is marked overjet of the maxillary edentulous ridge in the anterior section, as in Fig. 1, it must be accepted as indicating the necessity for overjet of the artificial incisors. To secure this in such way as to give the desired expression, it is necessary to establish such relations of the labial surfaces of the occlusion rims as are shown in Figs. 2 and 3. These occlusion rims are from another case of similar character. This relation is established by building up the labial aspect of the maxillary occlusion rim until it gives the proper expression to the upper lip, as part of the profile, without regard to the amount of overjet. It seems to be hard for many dentists to get the courage to do this, but it is necessary.

The labial surface of the mandibular occlusion rim is held back to where it will secure the proper turning outward of the margin of the lower lip and the formation of the hollow below that margin which plays so important a part in the expression of the lower third of the face, and which is nearly always destroyed by the position usually given to the labial surface of this rim. The fact that these relations may require an overjet of the incisors to which the dentist has never been accustomed should not be allowed to weaken in the least the dentist's resolution in securing these relations. If that resolution weakens in such cases and the teeth are set with only the small amount of overjet described as normal, the hollow below the lip margin will be made impossible,

the mandibular teeth will be set in front of the ridge with a consequent increase in leverage upon them, and, for patients who have the habitual forward slide of the mandible which has been referred to, the mandibular denture will continually displace the other. Such people, when furnished with dentures with only a small overjet, often say, "My teeth knock together all the time." The positions of the incisors in the case illustrated in Fig. 1 are shown in Fig. 4, and the facial appearance in Figs. 5 and 6.

#### TRIAL IN THE MOUTH

The teeth should be set by the technic given in the previous articles of this series, that is, beginning with the mandibular second bicuspid on one side, following it with the molars on that side and then with the bicuspids and molars on the other side. Set these teeth directly above the ridge and occlude the maxillary teeth with them.

If the mandibular posteriors are set first, the mandibular anteriors are likely to be placed directly above the ridge, whereas if the maxillary teeth are set first, the mandibular anteriors will probably be located in front of the ridge. If this occurs, the teeth are likely to be subjected to leverage which will frequently dislodge the mandibular denture.

If the preliminary steps have been well carried out, there is rarely any occasion for extensive rearrangement of the teeth when the trial plate is seen in the mouth. Such rearrangement as is required is usually confined to the anterior teeth. If, for instance, it is seen to be desirable to move the mandibular incisors forward, a Bunsen flame may

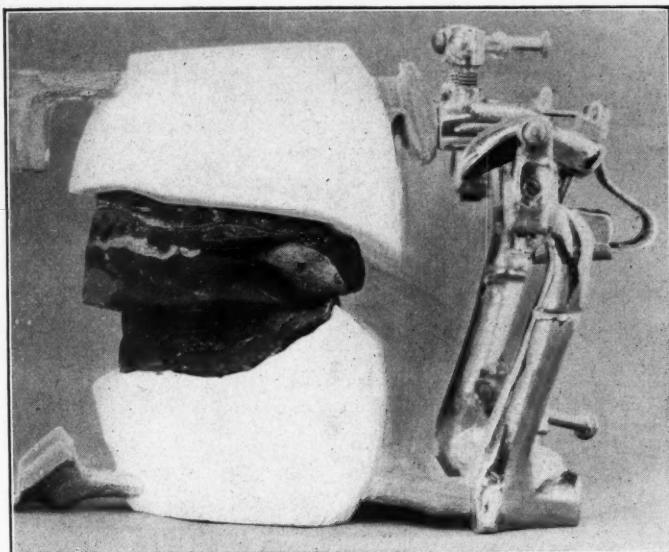


Fig. 2

An overjet like that shown here seems to many dentists to be extreme. It is essential to a satisfactory facial expression in this case.

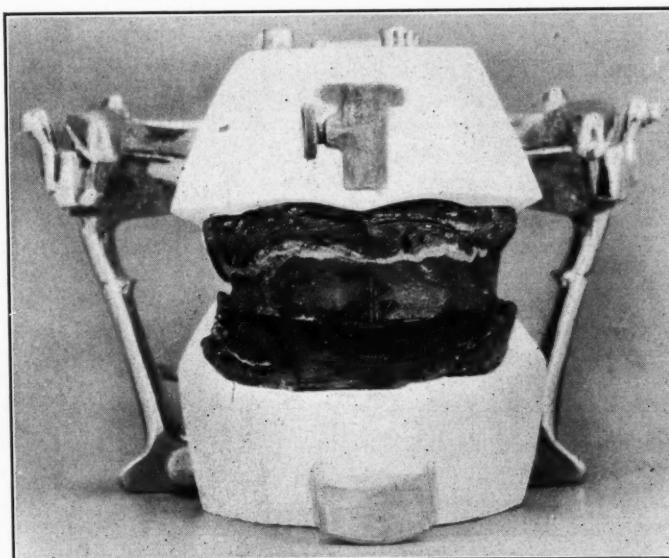


Fig. 3

Buccal view of the occlusion rims shown in sagittal view in Fig. 2.

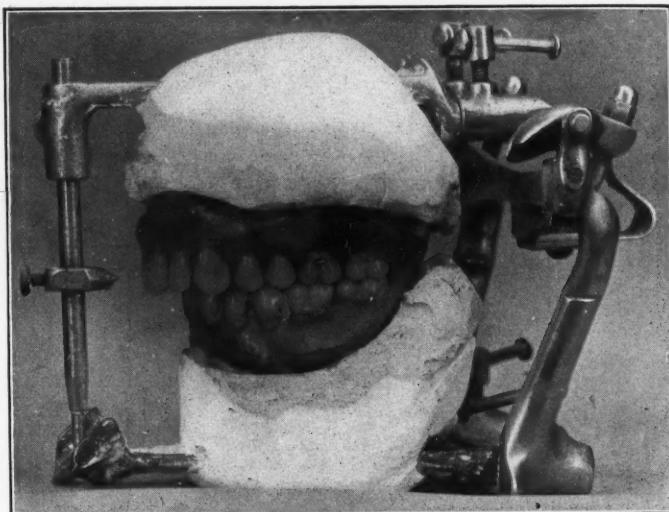


Fig. 4

The teeth are here arranged as indicated by occlusion rims similar to those in the preceding photograph. Note especially the suggestions in the text regarding the "correction" of such positions.



Fig. 5

If the labial surface of the mandibular occlusion rim is not held back further than the conventional relation to the maxillary occlusion rim, no effort by the dentist in any other direction will keep the lower lip from being too "full" at A, and the effect on the facial expression will be unsatisfactory to both patient and dentist.

be directed upward, inward and backward across the teeth in such way that only the side of its base touches the incisal half of the teeth and warms them just enough to soften the wax a little and make the movement easy.

If the anteriors are to be carried backward, the teeth may be warmed in the manner described and the cast and trial plate placed in front of the opera-

Now comes the severest test of the dentist in the entire history of the construction of the denture. The teeth have taken, perhaps partly by themselves under pressure, positions to which he is not accustomed. When he looks at the dentures after the patient has gone, these positions seem to him to be extreme and not at all as they appeared in the mouth. He is almost sure to say



Fig. 6

The patient with the dentures shown in the preceding pictures in place. Note the position of the edge of the lower lip and the presence of the hollow below it (A). In people of middle age it is often difficult to secure these results with artificial dentures and usually impossible unless the maxillary teeth show decided overjet.

tor with the anterior teeth pointing directly away from him; the two forefingers placed about the teeth, reaching from behind forward, may exert pressure just as the lip exerts it. This causes the teeth to seem to roll into position, that is, to lap each other in a pleasing way until the desired width is obtained.

to himself, "I cannot leave that tooth in that position," and so he begins to "correct" it and directly everything is spoiled. If he stays at the "correction" long enough, every tooth will be back in its conventional position, and all the character which he put into the denture, and which gave it a large part of its

value, will be lost. He will have shut his eyes on a vista of his own professional development and will thereafter be merely another maker of plates.

The moral is this—when the arrangement of teeth is satisfactory in the mouth, do not look at it again. Get the denture into vulcanite as quickly as

possible and without a single tooth "correction," and the irregularity which seemed so severe when the denture was held in the hand will take its place as an integral and pleasing part of the general expression.

285 Madison Avenue



#### [OCCLUSION]

*At the present time we recognize prophylactic treatment, if correctly performed, as an essential part of the preventive dentistry program, but a part only. If we are to practice preventive dentistry, we must add to our armamentarium. We must give the first consideration to function, providing for each tooth that amount of functional stress which our trained observation tell us it can safely sustain. And this is what the word "occlusion" means to me: provision of a functional mechanism adapted to the strength of these teeth and their supporting structures which we find in the mouths coming under our care. When this equilibrium is provided, it will be found that a large part of the dentist's worries have been eliminated, not only as regards periodontal disease, but as regards pulp disease and caries as well.*

—STILLMAN.

## Feeding and Dental Conditions

As Told to GEORGE WOOD CLAPP by an Orthodontist

So much attention is now being given to the effects of prenatal and nursing diets upon the form and health of the mouth and teeth that the data in the following case may be found interesting.

The patient was a boy of eleven years of age when he presented for orthodontic service. The conditions in his mouth, which are not uncommon to a great number of mouths, made it worthwhile to give some attention to his physical heritage and his nutritional history.

His mother, who came with him, is a woman of good physique who was in her late twenties when the boy was born. The father also is of good physique, and to all appearances his physical heritage was satisfactory.

The mother's dental arch is apparently of about normal form. While it is outside the practice of this office to do general dentistry, it is known from remarks that she has made that she has a great deal of trouble keeping her teeth in repair.

The mother appears to be a person of very decided opinions as to what she should do, and it is probable that her diet during the period of pregnancy was largely of her own choosing. She is especially fond of coffee and eggs, both of which she takes liberally. She partook freely of meat, white bread and potatoes, with comparatively small quantities of fruits and vegetables and no milk. She had no unusual physical difficulties during pregnancy and none at the time of birth.

The boy was breast-fed for eleven months, during the last month of which time cream of wheat was used to supplement the breast feeding. After the breast feeding stopped, the quantity of cream of wheat was increased.

The child was born with yellow jaundice and has always shown low resistance to mild infections. At five weeks of age he had measles, and they recurred when he was three years old. He had mumps when he was six years old and chicken-pox when he was eight. Since that time he has had one or two hard colds each winter, with a tendency to sinusitis.

His usual breakfast consists of shredded wheat with toddy or cocoa. At 10 a. m. he gets a half pint of milk.

At noon he eats a vegetable or noodle or meat-stock soup and one or more sandwiches made with white bread and salmon, meat or egg.

Dinner usually brings him pork chops or steak or a roast, with potatoes, cooked carrots or cabbage, occasionally some cold-slaw or head lettuce with dressing. In summer he may get fresh tomatoes or Waldorf salad or a fruit salad. Throughout the year he gets plenty of cake, cookies, candy and ice-cream, of all of which he is very fond.

His general skeletal development is apparently good, but we are learning that we cannot judge its quality entirely by its size and form. He is normally active, but not unusually so.

The mandibular dental arch is of good form and size, but the maxillary arch is retarded in development anterior

to the bicuspids to such an extent that the maxillary incisors close inside the mandibular incisors.

The quality of his teeth leaves much to be desired. Nos. 3, 4, 5, 7, 8, 9, 10, 11, 12, 13, 14, 21, 22, 23, 24, 25, 26, 27, 28 and 29\* show white lines of incipient enamel decalcification along the gingivae, and it is probable that unless they receive systematic attention these areas will break down into cavities. In addition to these lines, Nos. 7, 10, 12, 21, 22, 23, 26, 27, 28 and 30 show white spots of beginning decalcification, and Nos 3 and 13 show dark grooves along the gingivae. No. 30 is so dark that it is possible that the pulp is dead.

Here are prenatal, nursing and childhood diets seriously deficient in mineral salts and in the vitamins which make it possible for the body to appropriate from the food-stream such mineral salts as are present. Here are a mother's

teeth going to pieces before their time and a child whose maxillary arch is retarded in one phase of development, and whose teeth at the age of eleven seem to be well started on the road to disintegration.

Is it not at least probable that there is a more or less direct connection between the deficient diets of this mother and child and the conditions in this child's mouth? Is it not at least possible that if the mother's diet could have been corrected in the early days of pregnancy, her dental condition and the boy's might have been very different today?

In view of the fact that conditions more or less like this are, to say the least, very frequent among children who are brought to orthodontists, is it not desirable that dentists should endeavor to ascertain something about the prenatal, infant and childhood nutritional history of the patients, to the end that they may accumulate more and more convincing evidence to lay before parents and formulate lines of advice and procedure likely to bring the most satisfactory results?

\* The system of tooth enumeration used in the office of this orthodontist begins with the maxillary right third molar as No. 1 and the mandibular left third molar as No. 17.



## A Case Report of the Relation of Arthritis to Dental Focal Infection

By BENJAMIN B. KAMINSKY, B.S., Brooklyn, N. Y.

School of Dental and Oral Surgery, Columbia University '31

On November 25, 1929, Mrs. R. H., a Jewish housewife, aged 28, presented at the Dental Clinic of Columbia University for the treatment of vague neuralgic pains along the left malar, temporal and mandibular regions and accompanied by "rheumatism" in all the joints of the right side of about one year's duration. The most painful joint was that of the shoulder.

The past history showed that she had enjoyed general good health (with the exception of the exanthemata, measles and scarlet fever) until 1918, when she contracted influenza. After this she became a chronic sufferer from head-colds. She complained also of a cough, pain in the chest and sweating at night. Her past cardiac condition was fair, with occasional palpitations and a slight dyspnea on exertion. The gastro-intestinal history disclosed that her appetite and digestion were normal and the bowels fairly regular. There were no hemorrhoids nor hernia. Appendectomy had been performed in 1925.

Rheumatic or arthritic pains were first manifested in both shoulders and knees about four years previously (1925) and had decreased to a more or less extent after a tonsillectomy in 1927.

### FAMILY HISTORY

Mother died of heart trouble at age of 43.

Father was alive and well. Brothers (4) and sisters (2) also alive and well.

There was no tuberculosis nor kidney trouble in the family.

### PRESENT HISTORY

The patient has always lived in or near New York. She has two children, a boy 9 years of age and a girl aged 10; she had one miscarriage at a few weeks six years ago. Her habits are normal, being regular in meals and sleeping hours. When first examined she presented a chronically ill facial appearance, due no doubt to the chief complaint.

### ORAL EXAMINATION

1. Gums—hyperemic and of dark reddish appearance, due to improper hygiene.
2. Teeth.
  - (a) Missing—

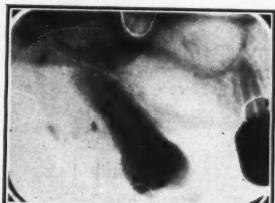
8	4, 6, 8
8, 7, 6	7, 8
  - (b) Non-vital, due to root-canal fillings—

6, 5, 4, 2	1
R	L
5	
  - (c) Radiographs showed the presence of a root fragment in the region of the left mandibular first molar.
3. Saliva—ropy in appearance and of normal quantity.
4. Tongue—negative.
5. Glands—negative.

### DIAGNOSIS

Root fragment in left mandibular region probably the cause of the vague

## UPPER



No. 1



No. 2



No. 3



No. 4



No. 5



No. 6



No. 7

The arrows point out the pathological conditions shown by rarefactions at the apical areas of the right maxillary bicuspids and first molar (extracted December 13, 1929) and the pathological periapical condition of the left mandibular second bicuspid and the root of the left mandibular first molar (extracted December 30, 1929). The left facial (temporal and malar) neuralgia disappeared upon removal of the root in the left mandibular first molar region.

facial neuralgia. The focus of infection was probably the apical areas about the non-vital teeth, which did show definite periapical rarefactions.

## TREATMENT

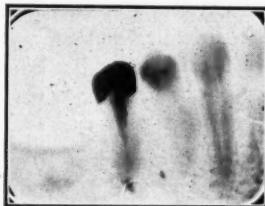
All the teeth showing periapical pathology were extracted and upon

microscopic examination proved to have granulomata. During the removal of the left mandibular molar root fragment it was found to be resting on the inferior dental canal, and its contents and the vessels were injured, with consequent hemorrhage. The wound was treated by packing with iodoform gauze and a

## LOWER



No. 8



No. 9



No. 10



No. 11



No. 12



No. 13



No. 14

paste of aristol, novocain and vaseline. Healing was uneventful, and the vague neuralgic pains disappeared immediately. Subsequently the patient gradually lost her ill appearance and gained in weight. At the present writing the arthritic pains in the joints, especially the shoulder joint, have almost entirely disappeared.

## CONCLUSION

The root-canal work was first done about six years ago, and the bilateral

arthritis first manifested itself about four years ago. An infected appendix was removed in 1925, with no cessation of the arthritic symptoms. However, there was a decided decrease and almost a complete cure for a time after the tonsillectomy in 1927. But a short time later (1928) the pains returned, this time localized on the left side, especially in the shoulder joint. During all this time there was no suspicion directed to the dental organs.

Clinically it was found that elimina-

tion of the periapical pathology caused a marked and almost spontaneous relief from the arthritic symptoms. At the present time it is beyond our knowledge to ascertain whether or not the dental organs were the primary or the secondary foci; whichever they were the

dental surgery was productive of results. This clinical case illustrates the necessity of close medical and dental cooperation in the treatment of systemic disorders—in this instance, arthritis.

126 Clara Street



[THE ANTRUM]

*Chronic upper respiratory conditions, coughs and colds are more often amenable to relief from nasal surgery, if they arise from an involvement of the sinuses, than is the case with the vasomotor rhinitis, hay-fever, asthma group, which show only a small percentage of improvement from any surgical procedure in that field. In antral infections of dental origin the infective agent is often a facultative anaerobe, and the infection may be unnoticed until some dental procedure, such as extraction, arises, and then there is a lighting up of this infection, and the patient traces his condition to dental operations, when, as a matter of fact, it had been present for a long time and had only been called to his attention at that particular moment.*

—TRIBLE.

## Some Observations on the Ductless Glands

By J. ALBERT DONLAN, M.D., Metuchen, N. J.

A ductless gland is an organ which produces an internal secretion that is not discharged through the medium of a duct. Proper function is necessary to maintain health and preserve life. Harmony is maintained and interaction effected by means of chemical substances, called hormones, which circulate in the blood. There is a mutual interrelationship between these glands. Examples are: the thyroid, the parathyroids, the adrenals, the pituitary, the carotid and the coccygeal. The testicles and the ovaries, in addition to their specific functions, produce an internal secretion. A hormone theory has been advanced concerning the appendix.

### THE THYROID GLAND

Iodothyrin is the specific principle of the thyroid gland. Its activity has an influence upon metabolism, detoxifying intermediate products. The internal secretion of the thyroid gland is essential to the normal functioning of other organs. An increase of thyroid activity augments fat and protein metabolism. The hormone has a specific action upon the central and sympathetic systems. When there is a loss of function, a condition called myxedema results, and when there is excessive or perverted function, hyperthyroidism or Graves' disease follows. Goiter is an indiscriminate term meaning simply any enlargement of the thyroid gland. An acute inflammation of the gland is called acute thyroiditis.

Hyperthyroidism is very often ill de-

fined from the standpoint of symptoms. When the goiter is evident and there is protrusion of the eyeballs, the name *exophthalmic goiter* is applied. The condition is due to aggravated activity or hyperthyroidism. There may be no striking manifestations of the characteristic symptoms, such as enlargement of the gland, tendency of the eyes to protrude, vasometer disturbances, loss of flesh, muscular tremors or tachycardia. Most of the cases occur in women between the ages of fifteen and forty. The exact cause is unknown and the onset may be attributed to worry, anemia, fright, fear or infection. It might be said that these factors furnish stimulation to the gland. The course is as a rule protracted and the onset insidious.

### THE PARATHYROIDS

The parathyroids are said to control calcium metabolism. Any absence or perversion of their secretion causes impoverishment of calcium in the tissues or permits it to combine with other substances. The result is hyperexcitability of the nerve cells and tetany.

### GOITER

Goiter occurs endemically, and the cause is said to be drinking water. Chemical elements such as iodin, magnesium and phosphorus are claimed to be responsible, because of their presence or absence. Marine deposits of the paleozoic age in the triassic and tertiary periods were believed by Bircher to be

responsible for goiter. Grassi and Muraron believed in a miasm due to a micro-organism. Goiter has been produced in rats by giving them water from a goiter spring, filtered and unfiltered. It has also been shown that in dialysis of water from goiter springs the residue upon the dialyzer produces goiter. An albuminous toxin is said to be a casual factor. When goiter is endemic, the water should be filtered and boiled and removal from the territory should be advised.

Iodin is most useful in parenchymatous and vascular goiter and of little use in cystic. For external use the best form is iodovasogen used daily. If internal administration is preferred, a weak solution of sodium iodid (1%) in pepsin several times daily is useful. If there is a tolerance, the iodin may be gradually increased. Susceptibility (acute iodism) demands immediate cessation of the use of iodin. When the gland diminishes in size, the dosage is reduced. Thyroid preparations are contra-indicated in this type and may be accompanied by bad effects.

Surgery is indicated before there is evidence of malignancy or pressure symptoms. Mortality based upon statistics gathered from various hospitals in large centers, smaller cities and towns where the condition is prevalent varies. Mortality has been reduced from 40% to 0.5%.

#### GRAVES' DISEASE

Until medical men in general are conversant with the transitional types and the insidious conduct of Graves' disease, there will always be failures. The opinion of a surgeon or a diagnostician who has had experience with

all types is a precautionary measure which, when more generally practiced, will aid in further reduction of mortality.

Graves' disease calls for skillful management. Many deaths have been caused by injudicious thyroid administration. In its management it is well to remember that one is dealing with the thyroid gland, other glands of internal secretion, a toxemia and the central nervous system. Textbook knowledge is a valuable guide to perfection, but years of experience in handling thyroid cases promote a broader conception.

Meats should be reduced or eliminated from the diet. Alcohol and tobacco are forbidden. Fatiguing exercise or laborious occupation encourages early myocardial degeneration. Climatic influences seem to be arbitrary. Pregnancy, the menopause, surgical operations, shock and worry frequently aggravate a latent or mild thyroid affection.

Many young women who have suffered with dysmenorrhea throughout life, and who become pregnant, often develop a severe form of pernicious vomiting early in pregnancy. There is evidence to believe that the condition is due to thyroid and ovarian dysfunction, perhaps unsuspected or unrecognized previous to marriage.

The severity of the disease is a variable one. Sometimes the symptoms supervene upon a goiter already present. There is no relation between the size of the goiter and the severity. There may be early a peculiar staring expression, lack of binocular convergency, difficulty or inability to evert the upper lip, tremor of the upper lid when closed gently. The nervous symptoms present

are headache, insomnia, vertigo, irritability or depression.

Tachycardia is commonly the earliest symptom. The patient complains of palpitation and throbbing of the arteries. There may be warmth, itching, erythema, arthritic pains, urticaria, excessive sweating and flushing. A secondary anemia usually supervenes. Eventually there is emaciation. The pulse pressure falls.

Slight and temporary enlargement of the thyroid may follow emotional disturbances or shock. This is a common occurrence about the time of puberty, at the menstrual period, during pregnancy and at the climacteric period. In acute thyroiditis there is a sensation of fullness of the neck, difficulty in swallowing, local pain or tenderness. Acute thyroiditis may be part of a general infection or may be due to trauma. Tight collars provoke a condition simulating the condition.

The symptoms consist of bilateral tonic, intermittent painful contractions or continuous spasms of the muscles of the hands or perhaps the feet.

#### ADDISON'S DISEASE

Addison's disease is due to adrenal deficiency. Clinically it is characterized by gastro-intestinal irritability, pigmentation of the skin and mucous membranes, muscular and vascular weakness. Usually pain, vomiting and diarrhoea are associated with it. A secondary anemia is present. It might be confused with pernicious anemia, Graves' disease, carcinoma, pellagra, argyria, arsenical poisoning, chronic jaundice, bronzed diabetes, dark-skinned races, pigmentation or pregnancy.

#### ACROMEGALY

Acromegaly is a disease which is due to a disordered function of the pituitary body. The teeth become separated from widening of the alveolar arches. Occlusion may be poor. There is a marked growth of the superior and inferior maxillae.

#### APPLICATION TO DENTISTRY

Many times individuals are advised to consult a dentist because of vague or trying symptoms which are due to disturbances of the glands of internal secretion. There is no use in repeating the statement that too often many either consult or are referred to the dentist without any intelligent study or because of a conviction that something is wrong which the dentist can remedy. Caries or crowns may require attention and, rather than the cause of the vague condition, may be the result of the disturbance.

For an intelligent consideration of metabolic diseases there must be a consideration of oral pathology. Because of their widespread effect any dental restorative procedure is not safe unless it is definitely known that none of these diseases exist. These diseases constitute a group of affections whose symptoms either are obtrusive for a long time or, because of their insidious nature and freedom from disability, are not recognized until much damage has been done. They are all alike in that they lead to ultimate and pronounced poisoning of the body. They are the result of the sum-total effects of the endogenous poisons of the body, the improper function of bodily tissues or organs in handling the end-products of the digestive tissues, and the lack of ability to

compete with known processes because of impaired, perverted or retarded function. It is believed that the endocrin

system has much influence in the occurrence of metabolic diseases.

344 Main Street



[THE PRESENT PROBLEM]

*In 1840, when Hayden appealed to the Medical College of the University of Maryland to establish a department of dentistry, he was refused. Medicine refused to recognize dentistry as a department of medicine, and the professions separated. As a result, the technic of dentistry developed, but the relation of that technic to the well-being of the individual was gradually neglected because of financial reasons. It is interesting to imagine that if the University of Maryland had accepted the College of Dentistry, we might have dentists today who would be writing prescriptions and giving pills, and we should have the rottenest kind of technical procedure and the same type of neglected mouths that are common in Europe. I am not saying that it was not a good thing; perhaps it was. I still believe it would have been better if the two professions could have recognized the relationship and developed together, because now we are faced absolutely with the necessity of either making dentistry a therapeutic measure for the benefit of the individual or recognizing it as a trade. Some of us said thirty years ago that, unless the colleges of dentistry could make the medical part of the dental curriculum a real entity, dentistry would become a trade. Some day we may wake up to find that it has happened.*

—NOYES.

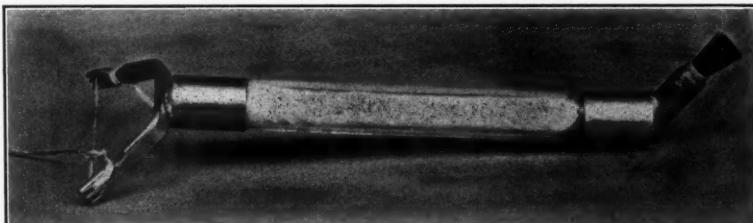
## How I Treat Pyorrhea

By G. N. GILBERT, D.D.S., Pana, Illinois

X-rays are taken first to determine which teeth must be extracted, the depth of the pockets and what poor dentistry may have been done. Contact points are restored. The patient is then instructed in the care of the gingival crevice, and with a disclosing solution he is shown the real condition of his teeth and what he must do to change conditions if mouth hygiene is to be maintained. In other words, he is shown where the dirt is, and how it can be removed.

floss on the bow attached to the other end of the instrument. When cleanliness is produced and drainage established, health follows.

The patient is taught the use of the instrument, is given the disclosing solution, the powder and the liquid, and told to use them as well as possible for a week. Thus, with cleanliness partly established, more brushing and some scaling can be done. Another week finds a vast improvement, and a more thor-



The patient is then supplied with an instrument with which to do this, a small brush set at an angle of 45° to a glass tube that holds silk floss, as illustrated. He is shown how to flatten the brush against a tooth, partly encircling it. Then, with a slight up-and-down motion of the brush, a powder and a liquid are carried up to and under the gum into the gingival crevice. The powder contains flour of pumice and sodium perborate, while the liquid is a fruit acid. Nascent oxygen is formed. The powder and brush fibers scour the tooth surface, freeing it from film and soft tartar, while the oxygen bubbles carry the debris from the crevice. The cleaning is finished by using the silk

ough scaling is possible. At the next visit, if the patient is under forty, the final scaling can often be done. The patient is instructed to use the outfit twice a week and to return in a month for inspection.

Forty years at the chair with scalers as my favorite instruments have taught me that all pyorrhea is not so simple as this, but 90% at least is simply dirt, and the cure can be expressed in a word—*friction*. The one patient, an adult, who needed no scaling was one who lived on “unfired food.”

As Fones has said: “Dentistry should be practiced continuously and constructively by each individual for himself or herself with the dentist as an occa-

sional helper, and not by the dentist with the patient as an occasional helper."

If we can teach our patients to care for themselves, we have done a greater work than curing them.



[ESTHETICS]

*If we assume that nature intended that our teeth should last and function a lifetime, it necessarily follows that she made no provision for taking care of the facial contour until the ridges were prepared for their reception. We find the reverse to be true when the teeth are lost. Nature cares nothing more for facial appearance, but immediately begins to readjust the facial muscles to a newly acquired position in order to bring the ridges together so that some form of mastication can be reestablished. Therefore, we have a completely changed expression, never to be regained if we permit it to be lost.*

—MC EUEN.

## Dentures—Immediate Restorations

By J. W. MCLEAN, D.D.S., Beatrice, Nebraska

Several articles on immediate denture restorations that do not seem to attain the best results have appeared in the dental journals during the past year. In those cases of large maxillary ridges where the patient shows considerable gum above the natural teeth, bone surgery may be resorted to and the entire anterior plate removed. But many patients will object to this, and it has another drawback in that by so doing all the natural landmarks for a perfect restoration are destroyed.

The plan I have used for the past ten years gives an immediate restoration ten minutes after extraction, with an exact duplication of the natural teeth. When a patient presents for a full maxillary extraction and restoration, all of the posteriors are extracted, bicuspid and molars, up to the six anteriors. The maxillary ridge is cleaned of all infection, smoothed up, and all sharp edges and prominences removed. The patient is dismissed for the period, generally from four to six weeks, ordinarily required to put the ridges in shape for a denture.

When this has been accomplished, the impression and bite are taken as for a full upper. Selection of the teeth is made, matching the shade and form of the incisors and cuspids still unextracted. Right here is an important point. Do not select porcelain teeth of the same size as the natural ones that they are to replace. If you do, they will appear about half again as large. Select them at least a millimeter shorter and

narrower. Fillings or inlays in the natural teeth can be duplicated in the porcelain teeth if desired.

The patient is dismissed for two days. Models are run up and articulated, and a wax baseplate made as for a partial upper. Beginning with the central incisors, each plaster tooth is cut off one at a time, the socket reamed out and the porcelain duplicate waxed in place in exactly the same position formerly occupied by the natural tooth, only a millimeter shorter. Follow with the bicuspid and molars and you have the full set-up.

Usually no artificial gum is allowed anterior to the second bicuspid, depending on the prominence of the natural ridge. The case is now flasked, vulcanized and finished. On the patient's return the six anteriors are extracted and the immediate restoration placed in position and adjusted. The patient is advised that for a few days it will be necessary to use plate powder, but I find that they usually dispense with it in about a week's time.

You now have a natural gum restoration that will puzzle the most critical to distinguish from the natural teeth which it has displaced. Another thing—there will be less mouth discomfort, no aching and sore sockets, and the patient can eat at once with far more pleasure than without the denture.

With the usual instructions about return sittings for adjustments the patient is dismissed with positive instructions not to remove the denture



until the following morning. At that time it is removed and thoroughly cleaned, the mouth washed with warm saline solution, and the denture immediately replaced.

The patient is advised that after a period of six months or a year, when enough resorption has taken place to

allow for a replacement of the anterior gum, he is to return for a refitting and the finishing of the denture.

These cases have been universally satisfactory, and all patients have been very appreciative, because they have not been compelled to go without teeth.

112½ North Sixth Street

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### Announcement from Indiana University School of Dentistry

It is announced from Indiana University that Dr. Sherman L. Davis has severed his connection with that institution. Dr. Davis will continue his work under a new connection. The Foundation for Nutritional Research, which was being organized at Indiana Uni-

versity School of Dentistry, will be abandoned because of the withdrawal of Dr. Davis.

A nutritional clinic will be continued in the school, as heretofore, along the lines which have been so carefully worked out by Dr. Davis.



## International Dental Federation (F.D.I.)

Chairman: Viscount de Casa Aguilar, Madrid  
Secretary: Geo. Villain, Paris  
Treasurer: A. L. T. C. van Hasselt, The Hague

### THE SCIENTIFIC COMMISSION

By DR. B. GOTTLIEB (Vienna)

At the International Congresses, which are held every five years in our profession, the latest achievements of dentistry are shown. Visitors can generally see here what their colleagues who are engaged in the progressive development in the most varied spheres have to report. The Congress is the personal international intermediary between the investigator and the practitioner. At this opportunity personal contact between the various investigators is made.

This opportunity, which recurs every five years and which should serve both these purposes, appears, however, to be insufficient, especially for the latter purpose. The pioneer groups of the several nations should have the opportunity of coming into contact with each other much more often. As valuable as literature is as a written medium, and as much as the *reference parts* of the periodicals attempt to give information on the spheres of work in the different languages, so little are they able to effect a really exhausting contact between the research institutions of the various nations. A short personal talk in a narrow circle often explains very much more concerning interests and working institutions of the several authors than a tedious study of the respective works. The Scientific Commission of the International Dental Federation offers such an annual possibility

of an intermediation, especially between the investigators themselves. In no case, however, is there a rigid limitation. The scientific transactions of the Commission are naturally accessible to every dentist who is interested in them. At the annual meetings authors from the various countries bring short reports on their original work or on work from their immediate neighborhood on which they have first-hand information. Such international meetings in narrow circles offer the possibility of obtaining mutual information on the various objects on hand, of original exhibits (preparations and the like), and to further the same. Such a contact, fostered in this way, between the investigators of all countries in the intervals between the Congresses has the effect that the reports on the new achievements destined for the Congress are presented in a clear and polished form, thanks to the previous direct conference between the pioneer groups of the various countries.

Apart from this permanent task of the Scientific Commission of the International Dental Federation, problems appear from time to time which are apt to revolutionize the whole profession. On the occasion of such events it is very advantageous to have a *permanent scientific institution*, to which representatives of all nations belong. By this means opportunity is given not only for

discussing questions continuously before an international forum, but for consid-

ering and proposing measures which are suitable for solving them.

### THE COMMISSION OF DOCUMENTATION

By DR. EMIL HUET (Brussels)

The Commission of Documentation was formed in the year 1909 in Berlin. From that date on it has never ceased to collaborate regularly in the F. D. I.'s activities.

Its program is briefly stated in the words, "furthering relations between authors and readers."

It is doing methodical work, following a scheme which comprises, at the same time, the collection, compiling, cataloging and utilization of books, dissertations, etc. The Commission of Documentation has during its activities studied particularly what are the best dispositions to be adopted for editing the analyses, for the biographical notes to be made and for the disposition of tables of contents and other writings in general.

The suggestions made by the Commission of Documentation are followed not only by a certain number of dental periodicals, but also by publications that have nothing to do with the dental profession.

In the course of the last sessions the Commission concerned itself with the

organization of the F. D. I.'s archives. It has enlarged their domain and has done its best to assure the conservation of all documents in the interest of investigators.

To this end the Commission has established the International Office for Documentation of the F. D. I. In order to give that office a juridical existence, allowing it to receive liberal gifts that are intended for the collective work, it has been decided to entrust the "Dental Documentary Foundation" with its management. This foundation has been created under the auspices of the F. D. I., and all its resources are intended for the enlargement of the collections.

### THE EIGHTH INTERNATIONAL DENTAL CONGRESS IN PARIS

takes place from late in July to early in August, 1931. Preparations are now in full swing. Further information will be given here shortly. Letters should be addressed to the Secretary, Geo. Villain, 45 Rue de la Tour d'Auvergne, Paris (9<sup>e</sup>), France.



## DIGESTS

### ORAL ASPECTS OF LEPROSY

By B. M. PREJEAN, D.D.S.

Leprosy is probably one of the oldest known diseases, since there are records that it was recognized as early as 4600 B. C. History gives proof that it was widespread in India in 1500 B. C. and in Persia in 1600 B. C. In 1871 A. D. the causative agent was isolated.

While leprosy exists in all parts of the world, it is most prevalent in tropical countries. At the National Leprosarium at Carville, Louisiana, the majority of patients come from Mexico, China, Louisiana, California, New York, Texas and Florida. The incidence of the disease among the white population in Louisiana is approximately twice that in the negro population.

In a study of oral conditions of lepers it was found that lepromas appear on the mucous membrane of the hard palate and the lips, rarely on the soft palate, and never on the buccal or labial aspect of the gums closely adjacent to the teeth. Ulcers are the results of disintegrating lepromas. The local use of mercurochrome is of value in the treatment of these oral lesions. When there was a strongly positive Wassermann reaction, perforation of the palate occurred.

Loss of sensation was found to be present on the mucous membrane of the lip, hard palate, tongue, cheek and gum tissue. In some cases there was

partial or full paralysis of certain muscles of the hard and soft palates and the mouth and lips, but the muscles of mastication were not involved. Pyorrhcea was very prevalent. Prophylactic treatment and elimination of foci of infection have aided in the improvement of the systemic condition.—*The Journal of the American Dental Association*, June, 1930.

### HEREDITY AND ITS INFLUENCE ON THE TEETH

By R. E. DENNEY, D.D.S.

The author states that a family inheritance of strong, well developed teeth or the reverse can be demonstrated by statistics, and that susceptibility or immunity to caries and pyorrhcea is apparently heritable.

Teeth are inherited as units, from either the paternal or the maternal ancestors, and not as a mixture of both. A strain of good teeth, added by marriage, will improve the teeth of the offspring, while the opposite also holds true.

The teeth are the product of the inheritance plus the influence of environment and personal care. Consequently dentists should inform parents who have poor teeth that their children will in all probability have poor teeth and should point out the necessity of early and frequent visits to the dentist so that careful prophylaxis may be car-

ried on and caries have prompt attention.—*The Dental Cosmos*, June, 1930.

### EXTENSIVE APPLICATION OF PORCELAIN JACKET CROWNS

By HARRY KAZIS, D.M.D.

The author first notes the advantages of the jacket crown, which are: the sealing and preservation of the tooth structure from decay; the insulation of the tooth from temperature changes; the strengthening of the tooth structure; its non-injuriousness to the surrounding gum tissue; and its fulfillment of the demands of esthetics.

He then cites the case of a young man all of whose teeth were atrophied, lacking in enamel and chocolate-brown in color. This was a family characteristic, only a few of the children being free from it. The teeth were vital and free from pathological conditions, so that it was decided not to extract them, as had been done for another member of the family.

The patient was so distressed by the condition of his teeth that he agreed to the expense and strain of having jacket crowns placed on all of them. The work was done under local anesthesia, and the restorations were

started in the molar region. The crowns have been in place for a year and have been entirely satisfactory.—*Dental Items of Interest*, June, 1930.

### A NOTE ON "DRY SOCKET"

By HARLEY KENNAN, L.D.S., B.D.Sc.

The author gives two common causes of dry socket. One is a sclerosis that diminishes the vascularity of the bone to such an extent that healing is seriously interfered with, and a socket devoid of granulation tissue ensues. The other is the presence of too much blood, and plugging the socket to stop the hemorrhage further lowers the vitality of the tissue.

The treatment consists in first washing out the socket with an antiseptic solution and then packing the socket with a piece of gauze saturated with campho-phenique and dipped in a mixture of glycerin and aspirin (one 5-grain tablet of aspirin ground up in a Dappen glass full of glycerin). This will give prompt relief from pain.

This dressing is changed daily for a week, and then for the next ten days dichloramin T (2% in distilled water) is used. The socket will heal slowly but normally.—*The Australian Journal of Dentistry*, May, 1930.

### Foreign Dental Literature

Edited by JOHN JACOB POSNER, LL.B., D.D.S., New York, N. Y.

#### THE QUANTITATIVE ASPECT OF THE ROOT-CANAL PROBLEM

By PROF. HANS PICHLER, Vienna  
Dean of the Dental University

The teachers of oral sepsis have

brought home to the dentist just how much they are to be held accountable for their root-canal treatment. Two things are definitely established. The first is that infection at the apex of a tooth may produce a systemic illness

which may in turn endanger the life of the patient. The second is that such infection may be produced by faulty root-canal work. There is a question whether or not the dentist takes this condition seriously and just what steps he pursues in order to avoid this dangerous condition and its consequences.

It is impossible to be certain that there will be no infection at the apex or that from such a primary infection there will be no general reaction. One must always bear in mind that in medicine there can be no mathematical certainty since so many elements enter into each disease. The smallest injury may cause infection and the simplest operation may endanger life. It is therefore impossible to be 100% safe, and even those who believe in the complete safety which should follow the removal of all dead teeth do not take into consideration the danger attending such removal.

It is well known that the root-canal problem is in bad shape and this has led to the adoption of various means to overcome its objections. Attempts have been made to do pulp amputation, while others have looked to extensive widening of the canals and complete disinfection and sterilization. Some depend upon the manner of filling the canals and finally come those who believe that root-apex amputation is the last word in the preservation of the dead tooth. It will be a long time before the correct method is known and followed.

Gottlieb and his adherents have come to the filling of canals with silver powder. Unfortunately at present this method is not easy to follow. This is due to mechanical difficulties. The writer has not much faith in this

method of root filling since he regards it as essential that there be a physically solid mass entirely filling the root canal. This root filling must be permanent even if the root filling is subsequently invaded by secondary caries, breaking off of the crown, or drilling into the root for a post crown, all of which brings the filling material into contact with the mouth bacteria.

The quantitative problem of root-canal work is important for the following reasons. There is some doubt that it is possible to sterilize all of the accessory canals and the dentinal tubuli. The author believes that, in the course of a long life, there is the possibility of reinfection and that frequently it does occur. There is a grave question as to whether an antiseptic exists which can fill the root canals and be of such lasting effect that it is impossible for it to become reinfected. Furthermore, the obstinacy of the periapical infection exists and persists above all reasons, because there are living bacteria within the tooth structure and they continue to multiply sufficiently until they have entered the periapical tissues. Whether harm is thereby caused depends upon three factors. They are the virulence of the bacteria, the protective strength of the organism, and the number of bacteria.

The only one of these which can be influenced is the last, and this we can control by strictly limiting the space they may occupy. The smaller the spaces in which the bacteria may live the fewer bacteria will survive. It is therefore a point of greatest importance that all accessory canals and tubuli be filled, and the main canal filled to the apex.

ERRORS IN DIAGNOSIS AND  
THERAPY IN DISEASE  
OF THE ANTRUM

By HANS MORAL  
University of Rostock, Germany

The author believes that the dentist should become more familiar with the antrum, and that the pathology of the antrum falls within the sphere of dentistry.

The development of cancer of the antrum is unknown to the same extent as the development of cancer in other parts of the body. Inflammation of the antrum is common, and its cause is well known.

When the antrum becomes involved in one of the inflammatory types, its origin may be through the nose, when it is known as rhinological. The inflammation of the antrum may be developed through a general grippe and we can in this case speak of a metastatic form. There is also the dental form which follows inflammatory processes about the teeth. In all these cases, the diseased antrum presents the same symptoms, but the treatment depends upon the origin of the condition. It is therefore to be borne in mind that there are three forms, the rhinological, the metastatic, and the dental.

Naturally all antrum diseases arising through the nose belong to the rhinologist. But the dental form should remain in the hands of the dentist. All other forms of antrum involvement may heal through irrigation, but the dental form will not clear up until the offending tooth is removed.

The amount of bone between the apex of the tooth and the antrum varies. Where it is paper thin, infec-

Another important point is to be sure that the apical foramen itself is opened up, as otherwise the canal cannot be properly filled. The canal must be widened mechanically and there is no danger of ill consequence if some of the root-filling material passes beyond the apex. This has been stated long ago by Dr. Hermann Prinz, and now, more recently, Georg Stein has shown radiographs of 500 cases bearing out this fact.

Back in 1913 the author said that he preferred a root filling packed solidly with guttapercha over one that depended upon antisepic qualities and left the canal poorly filled. The orifices of the dentin are sealed by the solid root filling and cannot do further damage.

The author's method of treating and filling the canal begins with the use of phosphoric acid with which the canal is swabbed. This acid is the liquid portion of cement. Iodoform, thymol and cement powder are mixed with some powdered silver. The silver is used by Pichler to make the root filling visible in the radiograph.

The cement mixture is then spatulated and the canal filled with it, and then guttapercha points are used to fill the canal, and plugged solid. The writer has had 28 years of excellent results in following this technic. The reason for the success of this method follows the solid plugging of the canals, thereby limiting the breeding space of bacteria.—*Zeitschrift für Stomatologie*, April 1930.



tion is easily communicated to the antrum. Sometimes if the bone is heavy it may still be penetrated by a granuloma which finally succeeds in breaking through into the antrum. Research shows that the second molar is in more intimate relation with the antrum than any other teeth. Sometimes the antrum may reach so far forward that a lateral may be the cause of antrum infection. The antero-posterior head picture is an excellent means of determining antrum involvement.

A radiograph of the antrum will show that there is disease present by the difference in shadow but it will not tell just what form the disease has taken. It is impossible to distinguish between pus, granulation tissue or polypoid tissue, or a tumor. An osteoma will show. Sometimes an antrum which has been operated upon and cleared up still shows a thickening and may thus lead to another operation. It is therefore always necessary to examine the case history. In acute antrum conditions the x-ray is negative although the patient has severe empyema. From the picture alone, the antrum would appear quite healthy. It is therefore seen that nothing can be judged definitely just by the x-ray.

A lamp is sometimes of value to differentiate a healthy antrum from one that is diseased, but inaccuracy here is possible because the structures on both sides may differ in size or thickness, which would interfere with correct reading of the condition if the transillumination was the only aid in diagnosis.

Ordinarily if a puncture is made intranasally and the antrum washed out with normal saline solution, pus or broken-down growth may be detected.

The fact that the washings are clear is not always an indication that the antrum is normal, as a growth may be present which is so hard and firm that washings from it will be clear.

Sometimes the antrum is mistaken for a cyst and is opened up. If a series of teeth are tender and sore, it may be caused by an inflamed antrum, particularly, if the bone is very thin.

If the material in the antrum is soft and glassy, it is merely inflammatory tissue. If it is hard, even in one or two places, it is a growth. If no pus is present and the tissue removed is thickened, it is usually a tumor. In treating antrum conditions, all the teeth involved, which are causing the infected antrum or are suspected, should be removed. If opening the antrum means that the neighboring teeth in the region will be involved, they should be opened, the pulps removed and the canals filled. Lack of sensation to the pulp tester means only that the nerve is injured. The blood-vessels may still be intact, which really means life to the tooth. The severing of both nerves and blood-vessels means a dead tooth.

The Caldwell-Luc method of opening an antrum is rated as best by the author.—*Zeitschrift für Stomatologie*, April, 1930.

#### THE TREATMENT OF LARGE MAXILLARY CYSTS AND THEIR RELATION TO THE NOSE

By M. WASSMUND  
Virchow Krankenhaus, Berlin, Germany

Some time ago the writer presented a treatise on maxillary cysts related to

the antrum, and in this article he discusses its complications when communicating with the nose. These anterior cysts may be so extensive as to destroy the bone forming the floor of the nose. All that may remain is the mucous membrane and the cyst bag separating the cyst and the nasal cavity.

Two methods of handling these cases are known, depending upon whether they are opened through the nose or through the mouth. The author condemns the nasal route and feels that all such cases should be handled through the mouth.

The Partsch method of operation is followed by the author, the only difference being in the manner of the flap. The Partsch incision is near the mucobuccal fold, but the writer following the two vertical incisions to the mesial and distal of the involved area, then separates the gum at the neck of the teeth and has a good long flap. The outer wall of the cyst is removed, and the cyst cavity cleared. The flap is then pushed inward and against the upper surface of the roof of the cyst where it is held in place by an iodoform gauze packing. It quickly adheres and helps to strengthen the floor of the nose. In time the entire cyst is filled in with bone.

The buccal bone which has been left bare by this procedure is covered with iodoform gauze which is held in place either by sutures to the adjacent teeth

or sewed to the gum nearby. In four or five days, granulation tissue covers this exposed bone, and presently a firm new gum tissue is formed. In four or five weeks the healing should be complete. The same result is seen in gingivectomy, in the treatment of pyorrhea and in the removal of epulis. All bone laid bare is again covered by nature.

Where the case is edentulous, it is possible to cut a longer flap by coming down onto the palatal aspect. Care must be taken not to cut the blood-vessels, as necrosis of the flap may result.

#### SPECIAL OPERATIVE PROCEDURES

In pushing the buccal flap inward to help form the floor of the nose, it is important to be careful that the neck of the flap is not being pressed against a sharp edge of bone, which would result in necrosis and death of the flap. This edge, the upper edge of the bony outline of the previous cyst, should be rounded nicely and smoothed.

Another point of importance is that the gauze packing, intended to hold the flap against the inner surface, should not be packed in too hard, as it will exert even greater pressure when filled with moisture, and thereby cause the loss of the valuable flap.

The flap should be examined the day following the operation and it should appear not too livid nor bloodless.—*Deutsche Zahnärztliche Wochenschrift*, May, 1930.



## DENTAL ECONOMICS

### The Problems of a Neighborhood Dental Practice\*†

By EDWARD J. RYAN, B.S., D.D.S., Chicago, Illinois

The neighborhood dental practitioner needs no apologist. His position and his duties are important, and his future appears unusually bright. The criterion of measurement of dental service is not represented by location, by garishness of office furnishings or by an important sounding office address. The quality of dental service is not indicated nor circumscribed by a dentist's geographic position. As the down-town location is not necessarily the badge of professional superiority, neither is the neighborhood location a symbol of professional inferiority. The quality of dental service transcends location, expensive equipment and seductive furnishings; it is something measurable only in terms of human values. It is the individual ability, intelligence, honesty and character of the dentist which determine the value of his service, and not his office location. This preface is intended to indicate that the neighborhood dentist is, in no sense, an inferior type.

For the sake of the present consideration the metropolitan area of Chicago may be conveniently divided

into four zones: (1) a focal zone of intensive and centralized business activity commonly known as the Loop; (2) several sub-focal zones of considerable commercial activity such as the neighborhood of Sixty-third Street and Halsted on the South, Lawrence and Broadway on the North, and Madison and Kedzie on the West (there are others, but these represent what is indicated by sub-focal zones); (3) the areas which comprise the greater part of the remainder of the metropolitan district—neighborhoods that are part business and part residential; (4) the suburban territory, which represents districts which are intimate parts of Chicago life and business, but which are outside the corporate limits of the city. For the sake of this discussion we may consider all the territory of the immediate district of Chicago outside the Loop as constituting the general classification of neighborhoods.

Any discussion of the problems of the neighborhood dental practitioner must, then, be very general, considering the enormous territory included. It must be clearly held in view that the study of neighborhoods represents a study in social problems. The wealth, intelligence, traditions and temperament of the persons in different

\* Read before the Chicago Dental Society, February 18, 1930.

† Reprinted from the Chicago Dental Society Bulletin, June 6, 1930.

neighborhoods vary greatly. There is the sordidness of the Ghetto and tenement districts at one pole; at the other the estates of Lake Forest millionaires, the greensward of the South Shore country clubs, and the snug homes of the affluent of the Western suburbs. Neighborhoods comprise much of territory and all degrees and manners of human life.

In the selection of the location for a neighborhood practice the dentist should be as thorough as the chain-store management is in selecting a location for a new store. The test of a good location is the accessibility to all forms of transportation and the degree of human activity about it. Whether the activity follows the transportation or the transportation the activity is a problem for the traffic engineer. Satisfactory explanations for the past growth of a neighborhood and an accurate prediction for its future growth are not forthcoming—the high-pressure realtor and his enthusiasm notwithstanding. Like Topsy, neighborhoods "just grow up."

It is said that the Walgreen Drug Stores and the United Cigar Stores make a comprehensive study of a neighborhood before starting a new store. The number of people who pass is tabulated, their buying habits noted, and the degree of prosperity of their home, clothes and automobiles is observed. The potency of competitive units is closely studied. It is suggested that the dentist in casting about for a location study the neighborhood at first hand, as the business man does, and not be seduced by the extravagant claims and prophetic powers of some equipment salesman. Then, too, there

is another consideration which is of greater importance to the dentist looking for a location than to the business man. The personal service which is Dentistry and the personality of the dentist complicate the situation. People will buy in a chain store if the price is advantageous, and if the location is convenient. Patients buying dentistry, however, are more often "buying" a dentist for his personal qualities of honesty, ability, agreeableness, etc., than because his price is low. People in "buying" a dentist, who will know such intimate things about them and will perform such highly personal services for them, are very likely to select the man who by temperament, race, religion or personal appearance is agreeable to them. The dentist in selecting a location should view himself objectively and impersonally and place himself in the community which is agreeable to him and, more important, one where the people are receptive to him. For the poetic-minded esthete to throw himself into the realities and the hard living of the tenements or for the uncouth, hard-fisted fellow to project himself into the chaste confines of the exclusive suburb would be disastrous to the dentist and, perhaps, to the community.

The transportation in Chicago or, rather, the lack of adequate transportation explains the recent activity of some of the large stores in establishing branch stores outside the Loop. Some of the Loop merchants, Marshall Field and Company and the "Hub," for example, found that many persons did not care to subject themselves to the inconveniences of travel to the Loop. Without a subway, with a "no parking in the Loop" ordinance, with the threat

of traffic jams and "rush hours," many people find it more convenient to trade in their neighborhood. The saving of time and of energy would compensate for a possible slightly higher price of the neighborhood article. These merchants, like Mahomet and the Mountain, found that if the people would not come to their stores, the stores would then go to the people. The result: the establishment within the last few years of neighborhood branch stores as intimate units of some of the long established Loop stores. The idea is becoming clear to the buying public that it is not necessary to undergo the stresses and strains of travel and the waste of time to make purchases in the Loop. People are finding that they can buy merchandise as advantageously in their neighborhoods.

These business tendencies toward decentralization will most certainly have a satisfactory effect upon the neighborhood dental practitioner. People who formerly made the trip downtown for a dental appointment often combined this duty with shopping. And women, who make up such a large percentage of our patients, when they find that they can buy with advantage in their neighborhood and at the same time conserve their energy and time, will begin to look about for a dentist who is both convenient and professionally able. If we dare make a prediction, I should say that the future will find the Loop practices made up largely of men patients and the neighborhood practices rating high in women and child patients. For my part, I prefer to be on the side with the women and the children.

What are the advantages to the den-

tist of a neighborhood practice? First, we notice that the dentist in such a location saves considerable time each day in not being required to travel many miles and many minutes to his office. This is another way of saying that the neighborhood dentist enjoys the advantage of one-half hour to two hours of daily productive time over his Loop colleague. Second, in conservation of energy the neighborhood practitioner enjoys an advantage. The combination of traffic noises, of the smoke pall, of crushing and bustling humanity are potent disadvantages to the nervous mechanism of men spending their lives in the Loop. In this connection Stuart Chase, a prominent economist, writing in the December 1929 *Harper's Magazine* on *The Future of the Great City*, says, "There are more painful than pleasurable sensations in one's contact with a huge American city of the present day. Pleasure is found in sudden glimpses, in certain lights on architectural masses, in occasional arresting and amusing adventures, in the arts which the great city has to display.

"Pain is found in noise, dust, smell, crowding, the pressure of the clock, in negotiating traffic, in great stretches of bleak and dour ugliness, in looking always up instead of out, in a continually battering sense of human inferiority."

So much for the advantages of the neighborhood practitioner. What, now, are his disadvantages and his special problems? First, it is generally difficult for the neighborhood dentist to draw patients from outside his own locality. The Loop practitioners may conveniently draw patients from the North, South and West. I do not believe, how-

ever, that this disadvantage to the neighborhood dentist is so great as it appears at first sight. The very nature of dental service indicates that the amount of productivity is limited to the ability of one person. Nothing that the dentist can do, no efficiencies nor refinements of operation will make it possible for a dentist to produce beyond a certain point. Mass production cannot come into dentistry. If the dentist enjoys a full practice in his neighborhood location, and if his affairs are conducted efficiently, there is nothing he can do by a change in location to the Loop which will extend his margin of productivity. A dentist is physically able to attend only so many people. True enough, a change to the Loop may make it possible for the dentist to increase his fees and to eliminate some of his undesirable patients. Generally speaking, however, success in a dental practice does not come from a spectacular system of fee-raising or from eliminating patients, but from efficiencies in operation whereby *every* patient pays a *profit* fee for *every* dental service. Mr. Woolworth founded quite a successful business on the principle that enough of the small purchases will make a satisfactory profit. Stopping the leaks, cutting down the free list, being paid for some of the important things that we too often give away—anaesthetics, examinations, cement bases, treatments, etc.—picking up the two- and three-dollar fees here and there; these are the things that make for economic success in a dental practice. The occasional spectacular fee is not the backbone of a successful practice.

Another disadvantage of the neighborhood dental practice is that his office

hours are often too long. Very often the better hours of the day are unproductive and the evening hours are well filled. This condition is largely of the dentist's own creation. If we will tell people frankly that dentistry done by artificial light, upon an exhausted patient, by a fatigued operator, is not of the best quality, we will find many of our patients coming in the daylight hours. Patients do not get their money's worth from dentistry done under the adverse conditions of artificial light and physical exhaustion; neither are they receptive patients nor are we efficient operators. If the neighborhood dentist will approach this problem as an individual one, forget his dental colleague on the next corner and his office hours and make the serious effort to cut down his evening hours gradually, he will find that he will profit physically, professionally and economically, and also that his patients will be happy and satisfied. It is perfectly proper, of course, to devote some time, say, a short evening or two a week, to those patients who cannot possibly come during the day.

The professional reputation of the neighborhood practitioner travels fast. One unfavorable reaction following an extraction is more quickly broadcast than a recitation of all the favorable results of dental treatment. A dentist should naturally try to keep his incident of unfavorable cases down as low as possible for his patient's sake and likewise for his own. The good-will, intangible and chimerical as it is, is of great value to any business. Good-will, however, does not imply giving things away. Too often dentists have believed that good-will implied free examinations,

gratuitous anesthetics, perpetual adjustments, payless treatments. Good-will indicates confidence, integrity, fair dealings—not charity. The dentist should constantly strive for the good-will of the public, but he should not labor under the delusion that it means giving important services away.

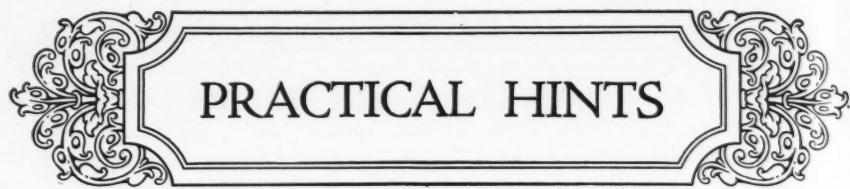
Just as the professional reputation of the dentist is quickly circulated through a neighborhood, so too is his business reputation. The "easy" dentist and the "hard" dentist are quickly classified. To the "easy" one people come not expecting to be required to make any definite arrangements for payment; to the good business dentist they go expecting good services, of course, and also expecting to pay punctually and according to definite terms. The dentist's business reputation, like his professional reputa-

tion, is of his own making. A community never values a dentist's services higher than he values them himself.

In the final analysis the economic problems of a neighborhood practice are not so unlike the economic problems of a Loop practice. Let us tell our patients the story of dentistry, its limitations and its possibilities. Let us tell our patients of their obligations. And let us constantly be on the alert to crush any business teachings that suggest fraud, misrepresentation, extortionate fees or high-pressure selling. Let our economic practices always be consistent with the best business principles and with the best professional traditions. The road away from economic darkness is paved with honesty, directness and fair dealing.

1218 Pratt Boulevard.





## PRACTICAL HINTS

THIS DEPARTMENT IS NOW BEING CONDUCTED FROM THE OFFICE OF THE DENTAL DIGEST. TO AVOID UNNECESSARY DELAYS, HINTS, QUESTIONS AND ANSWERS SHOULD BE ADDRESSED TO EDITOR PRACTICAL HINTS, THE DENTAL DIGEST, 220 WEST 42D STREET, NEW YORK, N. Y.

NOTE—Mention of proprietary articles by name in the text pages of THE DENTAL DIGEST is contrary to the policy of the magazine. Contributions containing names of proprietary articles will be altered in accordance with this rule.

*Editor, Practical Hints:*

In sensitive cavities you advise a thick paste of zinc oxid and eugenol mixed with cotton to facilitate its removal.

Is there any objection to mixing the zinc oxid and eugenol as thick as possible for a filling and, at the subsequent visit, preparing the cavity, leaving as much of the zinc oxid as possible to remain as a lining under the permanent filling?

S. J. M.

**ANSWER.**—If all the decay has been removed before the zinc oxid and eugenol is inserted, there is absolutely no objection to leaving it in as a cavity lining. In fact, it would be very good practice. However, it would be advisable to omit the cotton when mixing, and the permanent filling should not be placed until the zinc oxid has become thoroughly hardened.

*Editor, Practical Hints:*

I have a patient who is being treated by a specialist in medicine. I have taken out the second molar on the upper right side, which I feared was causing pressure on the third molar. She has a dead tooth also, and, although I do not

observe any infection at the root or surrounding structures, the physician has suggested to her that she have that extracted also. I have not extracted that tooth and do not want to do so until I have your opinion regarding it.

Please advise what you think should be done. There were no teeth below the second molar on the side where I extracted.

One reason why I did not extract the impacted wisdom tooth was because of the fact that the patient is not in a healthy state, and I thought that the pressure would be relieved from the third molar by taking out the second.

I am not much on taking the advice of a medical man where the knowledge of dentistry is involved.

W. B. W.

**ANSWER.**—First of all, it should be clearly understood that a tooth may be causing considerable systemic disturbance and yet show nothing on the x-ray. Where there is a systemic involvement and the physician in charge wishes the removal of a non-vital tooth, it is always best to comply, since there is absolutely no way of proving that the tooth is doing no harm. If you refuse

to extract, you will probably lose the patient, since the clearing up of a systemic condition is of more importance to her than the preservation of the tooth.

However, the patient should understand that it is being done at the request of the physician, and that the benefits that may result are entirely problematical. In other words, you refuse to assume any responsibility and are extracting only because in certain cases non-vital teeth are foci of infection and you cannot tell whether or not this particular tooth is a causative factor of the trouble.

*Editor, Practical Hints:*

I have a case of hypertrophy of the gums occurring only on the left side, both upper and lower and both labial and lingual. There are no mechanical irritations in fillings, crowns or dentures, except a profuse amount of calculus. I have scaled the teeth and applied astringents without results.

Will you kindly advise me further as to treatment?

R. B. G.

**ANSWER.**—Hypertrophy of the gum is due almost always to mechanical irritation. It may be that all of the calculus has not been removed. The occlusion should be carefully checked and balanced, since traumatic occlusion is sometimes a cause of this trouble.

The treatment consists in removing the cause. Mead says: "When there is a deep infiltration of the alveolar process with loosening of a number of teeth, it may be necessary to remove such teeth, and when this is done, it is better to remove the hypertrophied

margin of the alveolar process, otherwise it may be quite impossible to adapt an artificial denture to the mouth."

*Editor, Practical Hints:*

I should appreciate some information on the following case:

While using a caustic, some of it dropped on the patient's lip. It has caused a hard, dark scar. The caustic was  $H_2SO_4$ . Is there any way to remove the scar?

E. G. B.

**ANSWER.**—When using sulphuric acid, a saturated solution of sodium bicarbonate should always be on hand for use, in case the acid should come in contact with the soft tissues. It is advisable also to use the rubber dam whenever possible.

In the present case there is nothing that can be done except to avoid irritation. The scar will probably disappear in the course of time.

*Editor, Practical Hints:*

May I have your opinion in regard to the following cases:

*Case 1*

A year ago I made a cast aluminum denture for a patient who had previously broken two vulcanite plates. A short time afterward he began to read about the poisonous effect of food cooked in aluminum utensils and is so impressed by this theory that he will not wear the denture for fear of similar results from it. I too recently read an article by an Ohio dentist in which he claimed that the material when used

as a cooking utensil, would poison food cooked in it.

*Case 2*

A patient who eight or ten years ago had good teeth has since developed a bad case of rheumatism with the most serious and disastrous case of erosion or destruction of the enamel that I have ever seen. For example, the enamel of a molar has within two or three years practically disappeared, and all the teeth are affected, particularly the upper anteriors, in which the entire labial surfaces are devoid of enamel and the dentin is rapidly disappearing, of course.

Two or three years ago I had a discussion with the patient in regard to diet and advised that she try eating more vegetables and fruits. Now she tells me that she has lived on vegetables and fruits until she is sick of the sight of them. I am particularly interested because her sister's teeth show signs of developing the same condition.

I am satisfied that care of the teeth is not a factor, and in view of the fact that her diet has apparently been more nearly balanced than that of the average person I find it difficult to condemn it.

C. M. R.

**ANSWER.**—The faddist is always with us and, as a rule, he talks most convincingly, though his knowledge is chiefly gained from hearsay and very little is founded on fact. The use of aluminum has been tested and is approved by the Government. Your patient may rest assured that the aluminum denture is causing no harm, but if he persists in his idea—and he probably will—why not make him a

gold denture? That would be the best way out.

Your second case is not easy of solution and has caused many men a great deal of trouble. Without doubt the trouble is constitutional and probably has a direct relation to diet. Green vegetables and fruit are good and a quantity of milk is still better, but in this day and age it is sometimes difficult to get a woman to take milk. Some men are getting results by the use of calcium lactate.

*Editor, Practical Hints:*

Can you suggest what might be the cause and also the treatment for the following:

The patient, female, aged 56, complained of a burning sensation along the side and middle of the tongue shortly after beginning to wear a small partial denture made of green rubber. She has not worn the denture for a few weeks, and the burning sensation is gradually subsiding, but now she complains of a strong metallic taste. She has had a number of amalgam fillings in her posterior teeth for years, but has developed these symptoms only recently.

Three physicians have examined this patient, but they have been unable to find any systemic trouble.

Any information that you may be able to give will be greatly appreciated.

G. F. B.

**ANSWER.**—I take it for granted that the partial plate is a lower. The burning in the tongue might be due to the pressure of the denture acting reflexly on the lingual nerve, as, for instance, by way of the long buccal nerve. It is

doubtful whether in this case the sensation is due to the vulcanite.

In regard to the taste, it is quite probably due to infection, and a careful examination should be made for pockets, overhanging fillings, etc. Sometimes it is very hard to find the cause of the symptoms you describe.

*Editor, Practical Hints:*

Several months ago you published a prescription for use in treating Vincent's angina which contained zinc iodid, glycerin and distilled water. I have misplaced my copy of the issue of THE DENTAL DIGEST containing this prescription and am wondering whether you can give it to me.

L. A. H.

**ANSWER.**—We believe that the following prescription is the one you have reference to:

Zinc Iodid	20 parts
Tincture of Iodin	20 parts
Distilled Water	10 parts
Glycerin	50 parts

This appeared in an article by Herman Brody in the December 1928 issue of THE DENTAL DIGEST.

*Editor, Practical Hints:*

I have a patient, a young lady, aged 24, whose upper incisors are getting very thin at the incisal edges and also changing to a grayish appearance. In fact, the lower portions are almost transparent.

Any advice either you or the readers of THE DENTAL DIGEST may be able to give as to diet or treatment will be appreciated.

W. H. M.

**ANSWER.**—We shall be glad to pub-

lish your letter in the hope that some of our readers may be able to help you.

*Editor, Practical Hints:*

In working gold on metal dies made from Melotte's metal, what will remove the base metal from the gold?

E. G. B.

**ANSWER.**—You might try boiling the gold in nitric acid. Then wash carefully and, if all of the base metal has not been removed, boil it in sulphuric acid.

Babbitt's metal (1 part copper, 2 parts antimony, 8 parts tin, melted in the order named) is the best metal to use for dies.

*Editor, Practical Hints:*

I have a full upper denture case. The teeth were extracted and a vulcanite denture inserted in July 1929. The fit, suction, etc., were all right, but after wearing the denture for a few hours the patient would gag and have to remove it. Gagging would occur every few hours, and at times the denture could not be worn for a day or two.

I made another vulcanite plate, with the same results. I trimmed the palatal edge so that it would not encroach on the soft palate, but with no result except to lose the suction. I postdammed, etc., with no results. I have now made another plate, but the gagging continues, though the denture fits very well.

The patient cooperates in every way, but cannot wear the denture. He has been diabetic for years, takes insulin and at present is badly run down.

Any help you can give me with this case will be greatly appreciated.

P. J. R.

ANSWER.—It is evident from your description that after a few hours the suction is lost just enough to cause gagging by a lack of firm contact with the palate. It is well known that the adhesion of a denture depends to a certain extent upon the tone of the tissue underneath. Since the patient has dia-

betes, it may easily be possible that the tone of the oral tissue is such that no denture would be satisfactory, and I believe that such is the case. If a denture is fitted too tight, then more rapid resorption will occur until a moderate degree of looseness has resulted.



[TOOTHBRUSH DRILLS]

*The most important tissue to be stimulated and cleaned is so situated in the mouth that a sweeping movement of the brush will not touch it. Hence the necessity of employing the technic which I advocate. Ninety per cent or more of adults have periodontal disease and are brushing their teeth as the children are being taught in our schools today. I wish to repeat the statement which I have made many times, that it is impossible to teach an adult or a child how to make the tissue clean between the teeth from the platform or by toothbrush drills. Personal demonstration is the only way to make it clear.*

—CHARTERS.

## CORRESPONDENCE

### That Odd "Coin"

*Editor, THE DENTAL DIGEST:*

My guess is that the odd coin pictured on page 376 of the June issue of THE DENTAL DIGEST was the work of the individual dentist whose name appears upon it, probably an ingenious bit of novelty casting or molding, patterned from or upon an original coin and carried as a pocket piece or a watch charm. Possibly he favored some of his patients with one, if more than one were in existence.

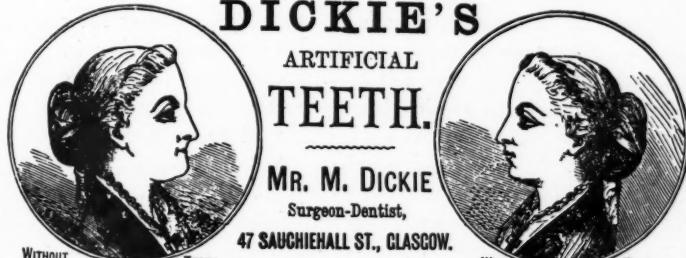
What dentist with original ideas and

the flair to execute them has not, at some point in his career, produced some such novelty, especially during his college days or soon after, by casting a miniature molar, his fraternity letters, a pair of aviation wings, etc.?

This Dr. Snow was doubtless gifted with the young, spirited imagination to conceive the idea and the technical ingenuity to execute it.

Sincerely yours,

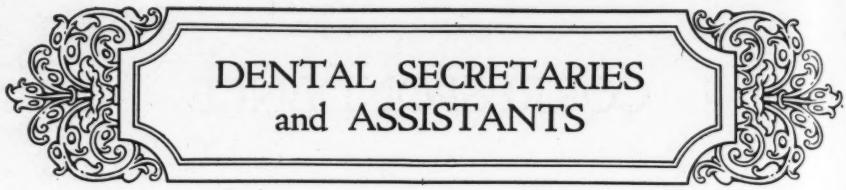
(Signed) H. C. KNIGHT.



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DECAYED TEETH STUFFED. CONSULTATION FREE. ATTENDANCE DAILY.  
47 Sauchiehall Street, GLASGOW.

This card was sent to us by F. R. Talley, D.D.S., of Petersburg, Va., and is at least seventy-five years old.



## DENTAL SECRETARIES and ASSISTANTS

### Secretaries' Questionnaire

All communications should be addressed to Elsie Pierce, care of  
THE DENTAL DIGEST, 220 West 42d Street, New York, N. Y.

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NOTE—HAVE YOU A BETTER WAY? HAVE YOU A TIME-SAVING SHORT-CUT? DO YOU KNOW A "STUNT" THAT LIGHTENS THE WORK OR MAKES FOR GREATER EFFICIENCY IN THE OFFICE? IF SO, WRITE TO ELSIE PIERCE. YOU MAY HELP MANY GIRLS WHO ARE BEGINNERS—AND YOU KNOW HOW YOU NEEDED HELP DURING YOUR FIRST FEW MONTHS IN A DENTAL OFFICE. PERHAPS YOU NEED HELP NOW. WRITE TO ELSIE PIERCE—SHE WILL HELP YOU.

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*Dear Miss Pierce:*

I should like you to tell me who you think should do the bookkeeping and look after the records of the office, the dentist or the assistant. I have been employed for four months in this position, my second in five years, and the dentist does not permit me to do his bookkeeping, write out the charts or care for any of the records, though he wants me to send out the bills. Bills have been sent out that were not correct, and to these patients the dentist has said that it was the fault of his secretary, and that he would have the bills corrected. It makes me cross to be blamed for something over which I have no control. If I kept the books and records, I believe I would know whether a statement sent out was in order as I would check the charts, which would keep me straight.

I am a faithful reader of your column and have gotten much valuable information therefrom.

L. B., Ohio.

**ANSWER.**—We believe that the assistant or secretary, as the dentist may prefer to call her, should have complete charge of the business transactions of the office, and this of course includes the bookkeeping, records, filing, banking, etc. Following the first interview with a patient, at which time financial arrangements should be made as to the payment for service rendered by the dentist, that is, the estimated approximate cost of the work and the method of payment, the assistant should be in charge of affairs.

Why not have a frank discussion of the matter with your employer? Ask him to give you a trial, and perhaps you will be able to convince him that you can do all this work for him. He probably has never had any one in his office who was capable of taking charge of the books and finances.

Also, we can understand your feelings in the matter of being blamed for something over which you have no control, but try to forget it as a personal

matter and look upon it as one of those circumstances that go to make the patient feel that he is receiving every consideration and courtesy. You can ask the dentist to make his arraignment of you as mild as possible, and we believe that he will get the point of view. Tact and patience with an employer are quite as essential as they are with patients.

*Dear Miss Pierce:*

I have been reading your column for quite some time, and now I desire some helpful suggestions from you. I have been in the employ of a dentist for one year, having started upon graduation from grammar school, and I think that I have become quite efficient in my work. I do all the chair-assisting, chart the work to be done, develop the x-rays, mix the amalgam, etc., send the periodical notices and statements, and do many other details too numerous to mention.

I wonder if you could suggest the amount of salary I should get. I am now earning \$13.00 per week and average ten hours a day in the office with a half-day off and no Sunday work. Also, I should like to know whether the assistant is supposed to buy her uniforms, and, if the dentist wishes her to join a society for dental assistants, whether she is supposed to pay the expenses.

I like my work very much and should like to remain in it if I could get a larger salary. Would you advise me to join a society in order to learn more?

I do wish you the best of luck and hope you keep up the good work you are doing, because I know that your

column is a great help to all the dental assistants who read it, as it has done wonders for me.

**"A DENTAL ASSISTANT."**

**ANSWER.**—The question of salary is one which is open to much discussion. It is one of those problems that the assistant has to face, and to which we cannot give a "cut-and-dried" solution, since it is strictly a personal matter between employer and employee and, as we have said many times before, it depends upon the quality of services rendered by the assistant and the willingness of the dentist to pay a commensurate compensation. We would say that this particular dentist has a "bargain" at \$13.00 a week, if the services mentioned are rendered efficiently, and we wonder if he is not taking just a little advantage of the youth of his assistant, basing his remuneration on her age rather than on her services to him.

We regret that we cannot give a sum as an example of what this young woman should be paid, but if she feels that she is worth more, she should ask the dentist for more or seek another position where she can earn more.

Regarding the buying of the uniforms, we cannot see how she can afford to buy her uniforms on the small salary she is getting. Well-made uniforms of good material cost money. She might buy about three on a week's salary. However, this again is a matter for the assistant to discuss with her employer. He certainly wants her always to look neat and well groomed. Anything else would detract from his professional dignity and the dignity of his office.

The matter of the assistant joining

a society at the suggestion of the dentist and his paying the expenses connected with it are also matters to be understood between them. The benefits derived from her membership, if the assistant is conscientious and will take advantage of all the educational features of such an organization, are reflected in better service in the office and certainly work to the advantage of the dentist. However, it has been our observation that "gratis" membership in any organization is usually taken as a matter of course, no personal responsibility having been exchanged in a financial way, and that whatever costs nothing is usually valued little.

Again, if the salary of the assistant were larger, we should say, "Pay your own dues," etc., but how can it be done in this case without inflicting a hardship?

Replying to the question, "Would

you advise me to join a society in order to learn more?" we think that you should do so by all means. What you learn is yours. It will help you personally, no matter in whose office you are employed.

We are glad that you like your work. One is always successful in an occupation one likes. Stick to it and you will certainly reap the reward in time. One year at your age can be used as a time of preparation for better things. In turn, we bid you good luck, coupled with the perseverance and determination to become of greater service to humanity as the years go by in the profession that you are serving.

We receive requests for positions. These we cannot comply with in this column. THE DENTAL DIGEST has a section devoted to "wants" of all types, and a well worded advertisement placed therein should bring results.

## Educational and Efficiency Society for Dental Assistants, First District, New York, Inc.

The Educational and Efficiency Society for Dental Assistants, First District, New York, Inc., will resume its regular sessions in October with a program of education for the dental assistant consisting of lectures, clinics, study groups and library.

Clinics on dental office procedure are in preparation by the Clinic Club, and the new season will usher in an augmented series of table demonstrations and exhibits on all phases of the assistant's work. Plans are being made

to continue the classes on chair assistance, sterilization, x-ray and laboratory assistance, secretarial procedure, instrument-sharpening and the care of equipment, dental anatomy, first aid, practical psychology, and other subjects of importance to the dental assistant. At the regular meetings the programs will comprise lectures by members of the dental profession and well-informed club women and the presentation of papers and clinics by members of the Society.

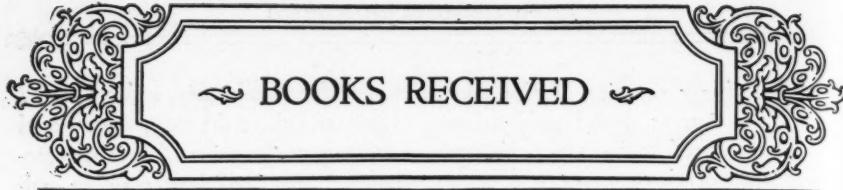
The Library contains articles taken from the current dental publications, books on dental topics, and a pictured history of dentistry and dental equipment. This material is available to members of the Society at all times.

It is the purpose of the Society to aid its members in acquiring knowledge in matters pertaining to their duties, to show them a larger conception of service in dentistry and to inspire loyalty to the ideals of the dental profession. The Society does not conduct a registry and is not connected with any commercial enterprise. Dental assistants employed in ethical dental offices are

eligible for membership and are urged to join and share the many educational advantages to be gained from such association. The President may be addressed: Mrs. E. V. Shoemaker, Kew Plaza, Kew Gardens, N. Y.

Meetings are held regularly on the second Tuesday evening of each month, October to May, inclusive, at the Academy of Medicine, 2 East 103rd Street, New York. The next meeting will take place on October 14, 1930, at 8 p. m. A cordial invitation to attend is extended to the members of the dental profession and to their assistants.





## BOOKS RECEIVED

A BOOK MAY BE AS GREAT A THING AS A BATTLE—DISRAELI

*The Fundamental Principles of Alveolo-Dental Radiology, A Text-book Dealing with the Technics of Taking Radiographs of the Teeth and Osseous Tissues of the Human Jaws, with an Analytical Treatise on Their Interpretation as a Basis of Diagnosis of Oral Lesions*, by Joseph Andrea Pollia, M.D., Los Angeles, California, Senior Attending Physician and Instructor of Internes, Los Angeles General Hospital; Instructor in Nutrition and Diseases of Metabolism, Dental College, University of Southern California; Postgraduate Lecturer on Alveolo-Dental Radiology before Numerous Dental Organizations.

This reviewer has had the opportunity of inspecting a great many radiographs taken by the average dental practitioner in all parts of the country, and on the whole it may be said that they are so poor as to be almost valueless as a means of making a diagnosis. Whether or not a man can become expert in the interpretation of radiographs is one thing, but there is no doubt that, with a little practice and a certain amount of fundamental knowledge, he can take radiographs that will bring out clearly the necessary detail.

This book by Pollia can be heartily recommended to all who wish to im-

prove their technic, and this should mean every one who has an x-ray machine. The whole ground is covered, from the theory of the roentgen ray to the interpretation of the film. The positioning of the patient, the length of time for the exposure, the developing, etc., are described in such detail that it is difficult to see how any one can go wrong.

Of course the interpretation of radiographs is another matter. Unless the normal is well known, it is hard to recognize slight pathologic variations, but study and practice will do wonders, and this treatise will be of inestimable value. The presswork and illustrations are of the highest order, and the publisher is to be congratulated on the result.

538 pp., with 774 illustrations and index. Brooklyn, N. Y.; Dental Items of Interest Publishing Company, Incorporated, 1930.—A. M. J.

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*Dental Terminology, Adapted from the B. N. A., Including Also Some General Dental Terminology Based on the Basle System*, by L. Pierce Anthony, D.D.S., F.A.C.D., for the Committee on Nomenclature of the American Dental Association.

Very few if any will dispute the desirability of placing dental termin-

ology on a scientific basis, but there may be some question as to whether or not it will receive immediate and widespread acceptance. The terms are entirely in Latin, which of course makes them possible to be understood the world over, and each structure is given one name only, thereby reducing the anatomical terms from more than thirty thousand to less than five thousand.

The selection of dental terms is not intended to be complete, but to serve as a foundation on which to build. It is a step in the right direction, and, since the distribution of the book is free, it is to be hoped that many men will avail themselves of the opportunity to secure it. Its use will be a gradual process, but sooner or later it must become universal.

An English-Latin vocabulary is included.—A. M. J.

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*Dependable Dentistry*, by Melvin E. Merker, D.D.S., New York, N. Y.

This book is a striking example of a sincere effort intended to be instructive to the public concerning dentistry, done in a thoroughly unprofessional manner.

It is an axiom with the best professional men that credit goes from the science and art of a profession to the individuals who practice it. Many men have become famous in professions, but they have usually been the first to say that it has been of unusual fidelity to professional principles rather than solely by individual merit, and they often add that if they could have known those principles better or earlier or followed them more closely, they

might have achieved greater success. When an individual seeks to shed luster on a profession by his own surpassing merit, other professional men are apt to distrust him and many of the more intelligent members of the public come to do so.

The foreword of the book says: "This book is sent forth with the purpose of impressing upon its readers the importance of 'dependable dentistry,' and why they should demand it. . . . If you can spare but a moment to merely glance through this book, you will be enabled to solve the problem as to why you should 'demand dependable dentistry.' "

Let us take the author at his word, assume that we have only a moment or two, and glance through the book for the solution he promises. We come, first of all, to a full-page portrait of Dr. Merker, a most distinguished and competent-looking gentleman, from whom, if from any one, we should be able to get dependable dentistry without having to demand it.

Under the heading, *Introduction*, we find that Dr. Merker has been in practice thirty-three years, that he has learned "how to obtain the best results in each case," and that his reconstruction work along every line has been a marked success. The book shows by pictures, text and inference that these very modest statements are not true in the same degree of many of the more than 60,000 other dentists in practice in this country.

There is some material in the book with which other dentists will agree, and some with which they will actively disagree. As we glance through the book, in our moment or two, we find

this presented in a friendly, not to say familiar, way. Taking a page not especially striking in this respect, we find the pronouns "we" and "us" used nineteen times in describing accomplishment. It is merely accidental that it is page 13.

What courage Dr. Merker has to write as he does on page 21: "In most cases of infected teeth, it is far more preferable to have the affected teeth treated where possible than to resort to extraction. Most teeth will respond to treatment, and it is much better to treat the root of an infected tooth and crown it, or utilize it as a pier for a bridge, than to extract it." How far back into dentistry's dark ages that carries some of us!

As we glance rapidly through the book, we find pages 62 and 63 rich in instruction. On page 62 Dr. Merker shows forty-four constructions which other dentists have made and put into

human mouths, and which he has replaced with the construction in which, as he admits, he is so successful. Page 63 bears this heading, "On this and the following pages are shown a series of pictures of some of our patients who profited by dependable dental service." On page 69 under one of these pictures we find the following sentence: "Compare this with Figures No. 3 and No. 4 which show what he was wearing when he came to us."

If the purpose of the book is to increase Dr. Merker's practice, it may be successful, but it may have other consequences of which he could not have thought when he published it—it may do much harm to his professional standing. If he really wants to retain general professional good-will, the best thing he can do is to recall every copy of the book and burn them all.—G. W. C.



## EXTRACTIONS

No Literature can have a long continuance if not diversified with humor—ADDISON

When in doubt use your brains.

A married man is one who has two hands with which to steer his car.

Can you remember away back when a bathing girl felt real angry if you splashed water on her?

A Buffalo dentist was bitten by one of his patients. Now he does work only for vegetarians.

A man never realizes how many hydrants there are in this country until he buys an automobile.

(Joe)—What would you call a man who deceived his wife for twelve years?

(Bob)—A magician, by heck!

"Adam delves and Eve spins." That is to say, the modern wife goes motoring while the husband plays golf.

She wore her stockings inside out  
All through the summer heat;  
She said it cooled her off to turn  
The hose upon her feet.

(Joblots)—I hear your father has become a prohibition officer.

(Jiblets)—Yeah, the darn stuff got too expensive to buy.

(Fussy Customer)—Are those eggs strictly fresh?

(Grocer to Assistant)—George, just feel if those eggs are cool enough to sell yet.

### VACATION TIME

It is time to go away  
For a quiet country stay,  
Where the wren  
And the hen  
And the leather-throated jay  
Rouse the world at dawn of day.  
It is time to seek a rest  
In the rural regions blest  
Where the crows  
Wreck repose,  
Holding raucous  
Morning caucus,  
Where the yawping yellow-hammer  
Starts at 4 A. M. to yammer,  
And the early-rising phoebe  
Give a man the heebie-jeebies.

Only those are dead who are forgotten.

(Landlady)—And how do you feel now?  
(Lodger)—Just terrible. I'm sure I'm going to die.

(Landlady)—Well, you can't die here; this is the living room.

A little girl got on a street car carrying a pair of skates. A young man got up and offered her a seat.

"Thank you very much," she said, "I've been skating all day and I'm tired of sitting down."

Speaking of the wet-or-dry straw vote, some geezer writes in to ask how it went in Rye, N. Y., Whisky Creek, Ark., Cornville, Ariz., and Big Bar, Calif.? Our answer was "probably moist!"

(Customer in Laundry)—Here—look what you did to this article!

(Laundryman)—I don't see anything the matter with that lace.

(Customer)—Lace nothing! That was a linen sheet before coming here.

### A COUPLE OF JOLLY ADS.

WANTED—Man with wrinkles and puffs under eyes for demonstration purposes.

WANTED—Patients for State Board having cavities in front teeth. Will not hurt you a bit.

—Morning Paper.

(Wise Guy)—Rise every morning with the fixed determination to make your wife realize that you are the master of the house!

(Friend)—All right, Bozo, but I know what will happen. You'll have to get your own breakfast.

### How EVOLUTION WORKS

The babbling brook runs on to meet  
The river deep and wide,  
The river wends its way to sea  
To mingle with the tide;  
The ocean lifts its giant waves,  
And with a mighty roar  
Flings its billows, crested white,  
Upward on the shore.  
The sunshine takes the flying spray  
And lifts it to the sky,  
To drop it once again as rain  
In the place where it used to lie.

## FUTURE EVENTS

A Brooklyn Public Health Exposition is to be held during the week of October 20, 1930, in Brooklyn, a borough of the City of New York. The Exposition is to take place under the sanction and endorsement of the Medical Society of the County of Kings and the Second District Dental Society.

Shirley W. Wynne, M.D., Health Commissioner of the City of New York; Hon. Henry Hesterberg, Borough President; Luther F. Warren, M.D., President of the Medical Society of the County of Kings, and George Crawford Douglass, D.D.S., President of the Second District Dental Society, are Honorary Chairmen of the Exposition.

Headquarters for the show, which is to be held in the 23rd Regiment Armory, have been opened in the Brooklyn Chamber of Commerce Building, 66 Court Street.

In connection with the Exposition, President Hesterberg has issued a proclamation setting aside the week of the show as Public Health Week. There will be broadcast through one or more of the larger radio stations messages from the Health Commissioner, Commissioner of Sanitation and other speakers equally well known to the general public.

There are 4,500 physicians, 3,000 dentists and 2,750 retail druggists in Brooklyn. For these the Exposition will be open from 11 A. M. to 1 P. M. daily, so that manufacturers may provide demonstrations not offered through the usual channels of merchandising. Factory experts and technicians will thus have an opportunity to meet the members of the professions.

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THE ILLINOIS DEPARTMENT OF REGISTRATION AND EDUCATION will conduct examinations for registration to practice dentistry in Illinois on the following dates:

November 18-21, 1930, at the University of Illinois College of Dentistry, 1838 West Harrison Street, Chicago, Ill.

THE SIXTH GREATER NEW YORK DECEMBER MEETING FOR BETTER DENTISTRY will be held at the Hotel Pennsylvania, New York, December 1-5, 1930.

A return post-card sent to the membership of both societies, including nineteen subjects which the Committee considered might be of interest to subscribers, brought over five hundred replies, showing a marked interest in suggestions to the Committee for selection of clinic material.

The topic discussions will again occupy an important place in the program.

A manufacturers' exhibit will be held in the hotel simultaneously with this meeting.

JOHN T. HANKS, *Chairman*,  
CHARLES M. MCNEELY, *Vice-Chairman*.

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THE SECOND INTERNATIONAL ORTHODONTIC CONGRESS will be held at the Hotel Great Central, London, England, July 20-24, 1931.

A full and interesting program of papers and demonstrations is anticipated, and a museum is being organized. Suitable entertainment for ladies accompanying members will be arranged. Intending contributors to the activities of the Congress can obtain from the secretaries of their respective orthodontic or dental societies the conditions under which contributions are invited. The Secretary-General (A. C. Lockett, 75 Grosvenor Street, London, W.1) also will be happy to give information on request.

Information regarding traveling facilities and hotel accommodations may be obtained from the official agents to the Congress, Messrs. Morgan Pope & Co., of 7 St. James's Street, London, S.W.1; 6 Rue Caumartin, Paris; 71 Vanderbilt Avenue, New York; and Messrs. Noel Vester & Co. (Agents), 44 Unter den Linden, Berlin.

J. H. BABCOCK, *President-General*,  
G. NORTHCROFT, *Vice-President General*,  
E. D. BARROWS, *Treasurer-General*,  
A. C. LOCKETT, } *Secretaries-General*.  
B. M. STEPHENS,



